PROJECT LICENSED PROFESSIONAL CERTIFICATES

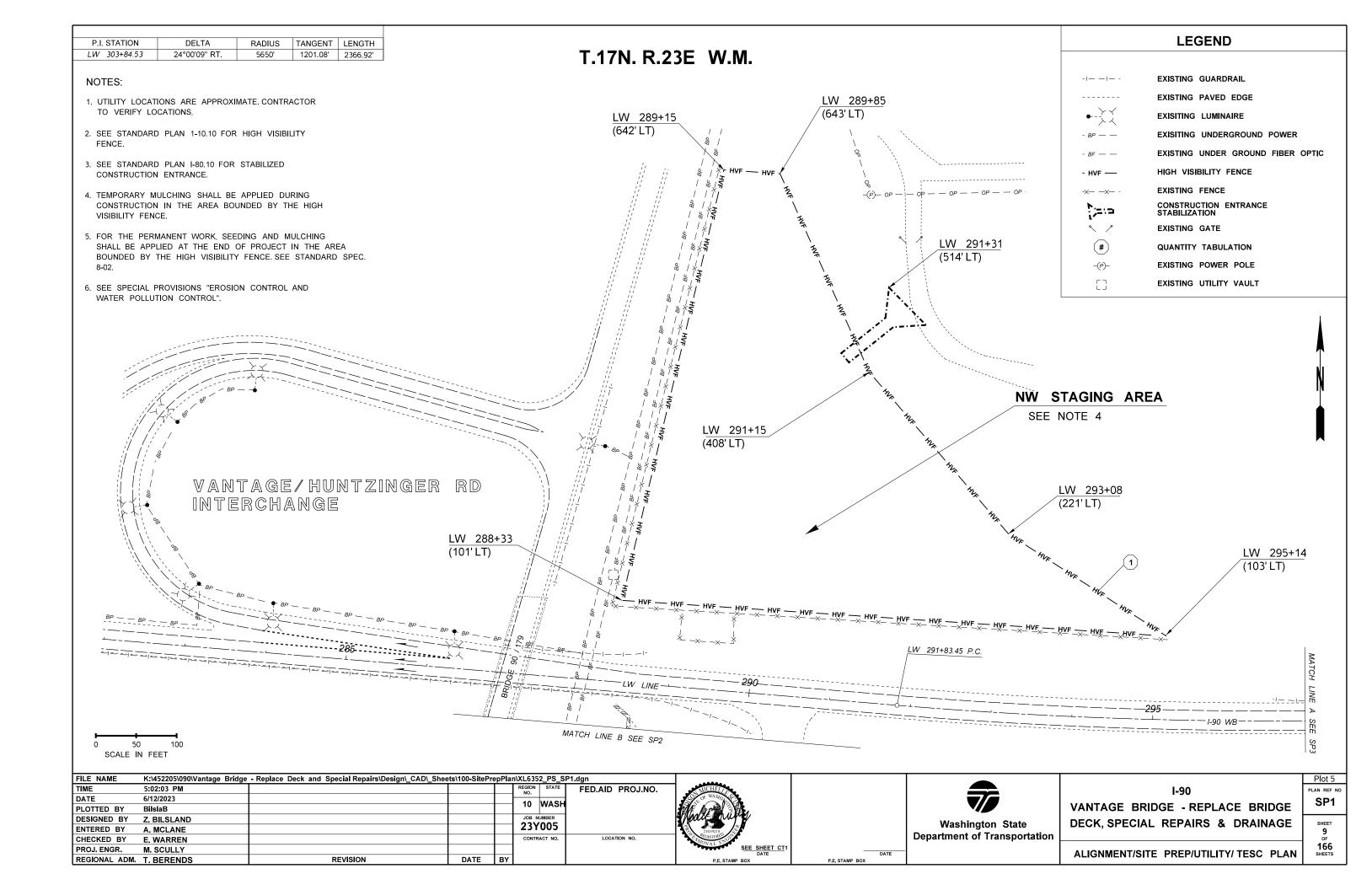
Mode July	amy C. Leland	Ade Manni	B.all
Madison Scully	Amy C Leland	Anthony Mizumori	aldricb@wsdot.wa.gov
Jun 14, 2023	Jun 14, 2023	Jun 14, 2023	Jun 14, 2023
AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.
Jam Todd Daley			
Jun 14, 2023			
AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.
AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.

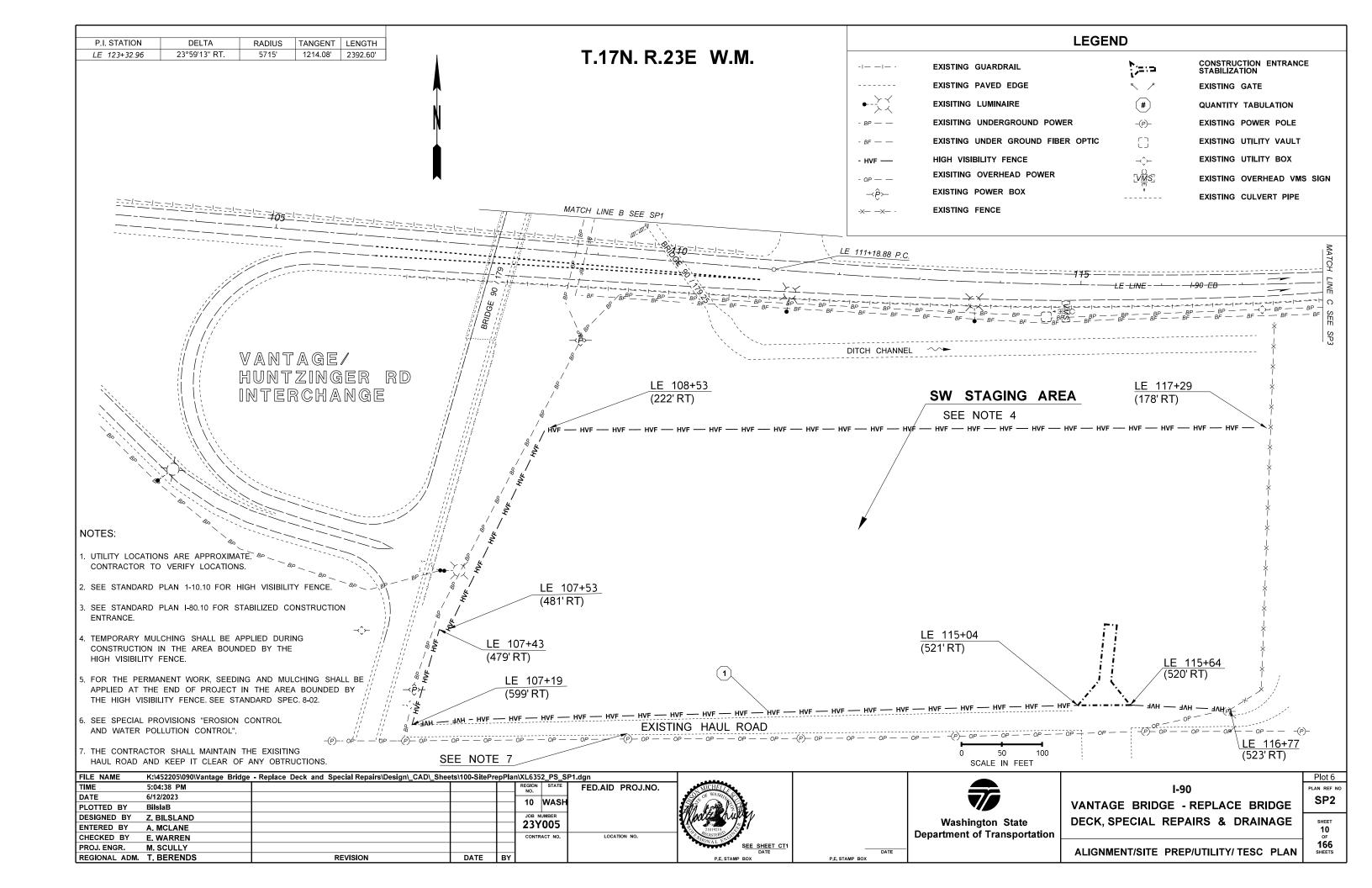
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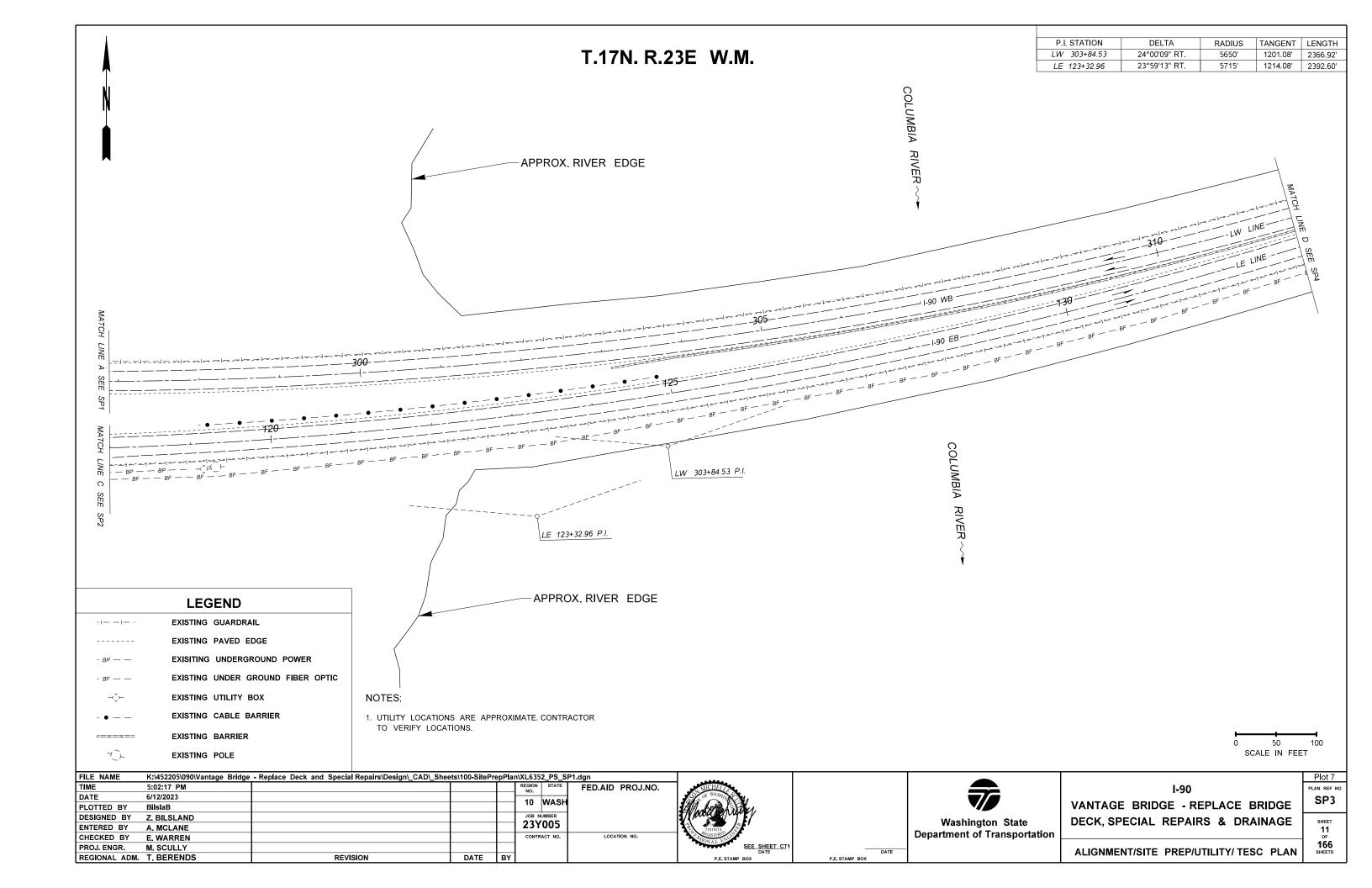
- 1. THIS PLAN SET WAS DEVELOPED ELECTRONICALLY UNDER THE DIRECT SUPERVISION OF THE LICENSED PROFESSIONALS THAT HAVE AFFIXED THEIR SIGNATURE TO THIS PAGE.
- 2. THIS SHEET SERVES AS THE CERTIFICATION BY THE ABOVE LICENSED PROFESSIONALS OF ALL SHEETS IN THIS PLAN SET WHERE THEIR STAMPS AND SIGNATURES APPEAR.

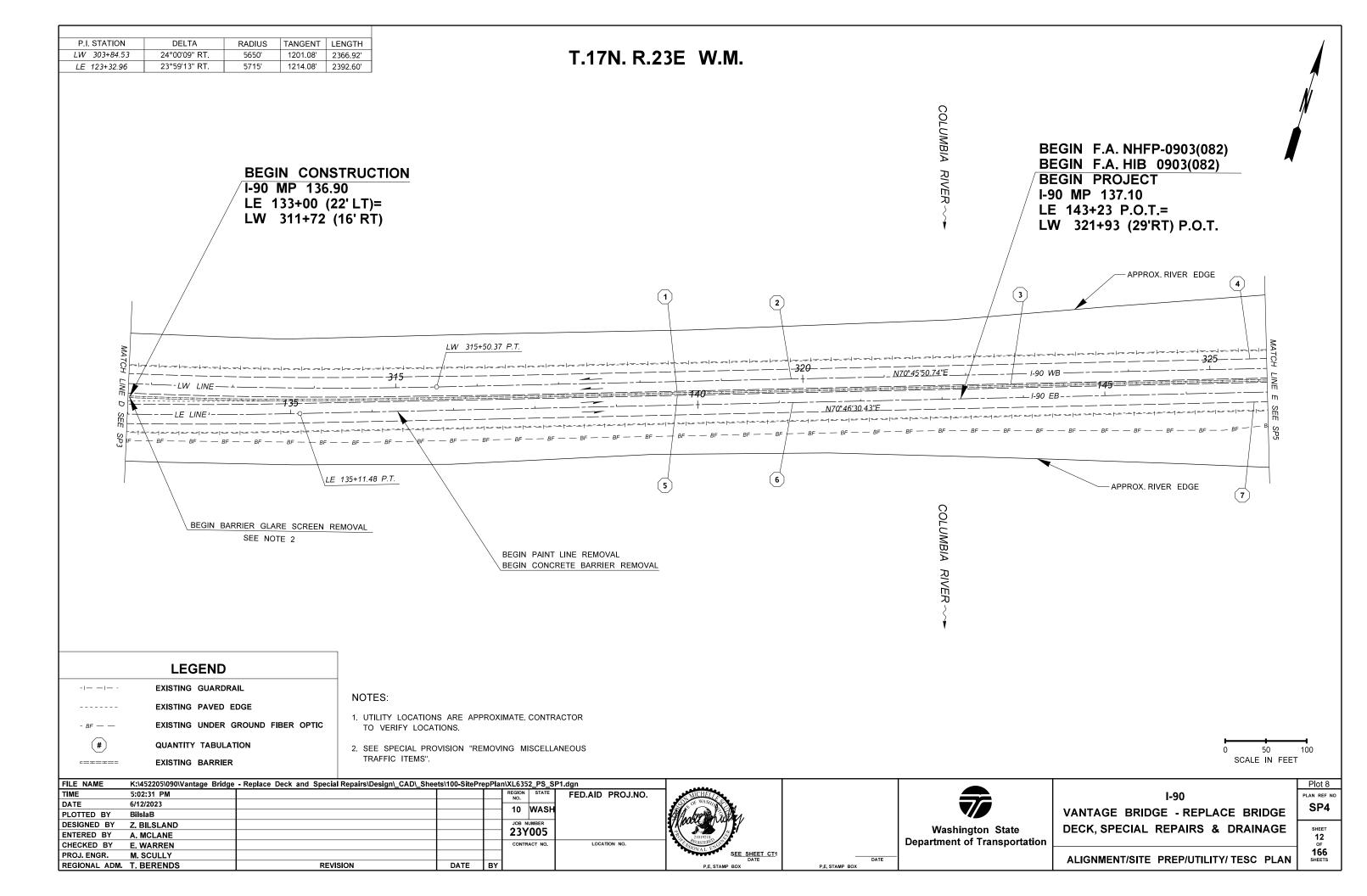
FILE NAME	K:\452205\090\Vantage Bridge - Replace Deck and Spe	cial Repairs\Design_CAD_Sheets\0	015-Certificati	onSheet\XL6352	_PS_CT.dgn					Plot 1
TIME	1:49:04 PM			REGION STATE	FED.AID PROJ.NO.	1			I-90	PLAN REF NO
DATE	6/5/2023			10 WAS	d					CT1
PLOTTED BY	McLaneA			10 WA3					VANTAGE BRIDGE - REPLACE BRIDGE	
DESIGNED BY	Z. BILSLAND			JOB NUMBER				Washington State	DECK, SPECIAL REPAIRS & DRAINAGE	SHEET
ENTERED BY	A. MCLANE			23Y005				3	1	7
CHECKED BY	E. WARREN			CONTRACT NO.	LOCATION NO.			Department of Transportation		OF
PROJ. ENGR.	M. SCULLY					DATE	DATE		CERTIFICATION SHEET	166 SHEETS
REGIONAL ADM	T BERENDS R	EVISION	DATE B	V		DE STAMP BOY	DE STAMP POY		JEKINIOATION GILLI	SILLIS

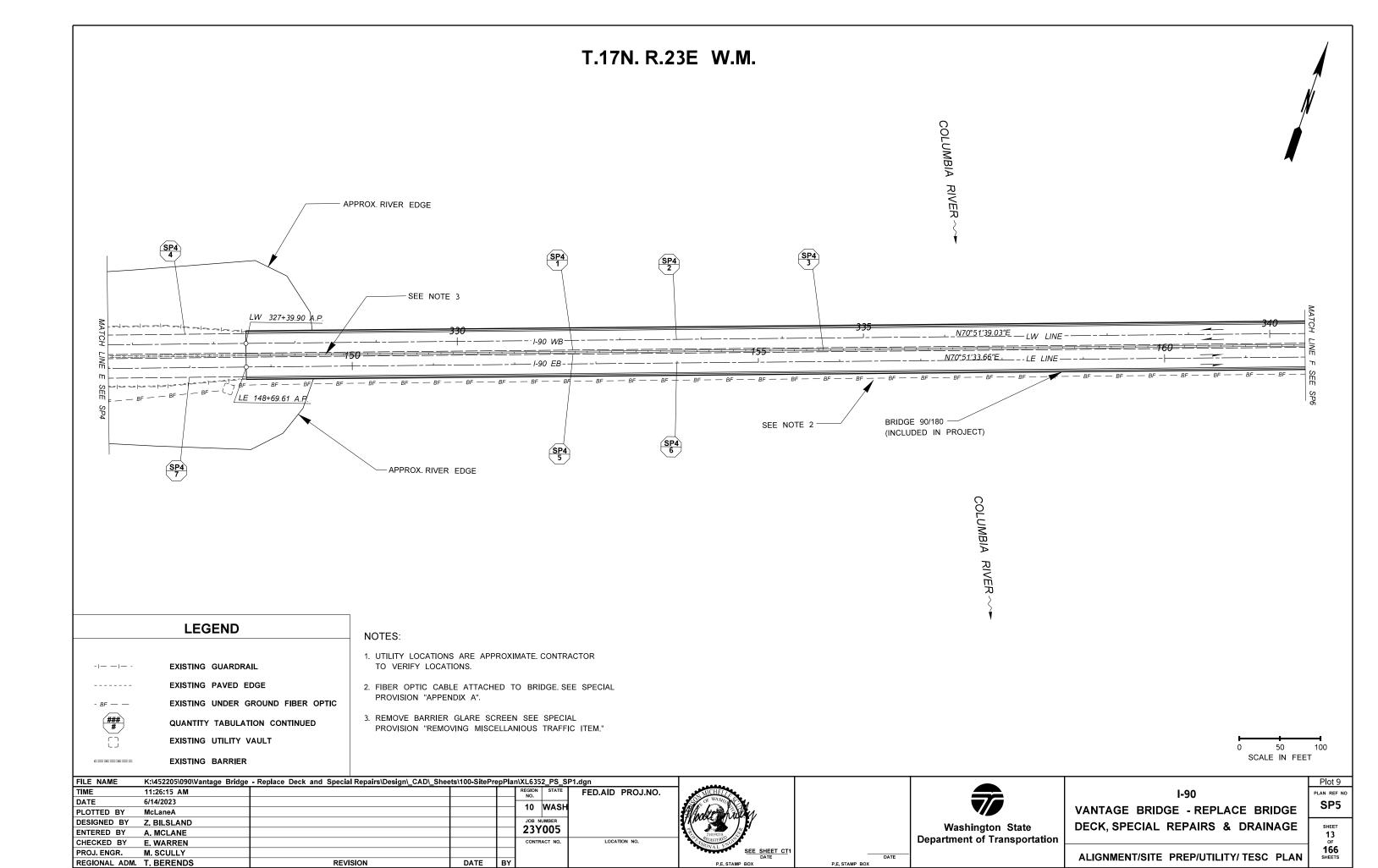
	QUA	YTITA	TABL	JLATI	ON -	- ALI	GNMEN	T/SITE	PRE	P/UT	TILITY	// TE	SC F	PLAN	
NOTE:															GENERAL NOTES:
THE FIRST NUMBER OF THE "CODE" BELOW REFERS TO THE SHEET NO. OR THE SHEET REFERENCE NO. SHOWING THE CONSTRUCTION FEATURE. THE SECOND NUMBER REFERS TO THE CONSTRUCTION FEATURE FOUND ON THAT SHEET.		REMOVING CONC BARRIER REMOVING PAINT LINE			INLET PROTECTION	HIGH VISIBILITY FENCE	REMOVING AND RESETTING EXISTING PERMANENT BARRIER***							SEE GENERAL NOTES	
CODE LOCATION Y \ UNIT OF MEASURE >	L	F. L.F.			EACH	L.F.	L.F.								
SP1-1 LW 288+64 (641'LT) TO LW 295+31 (30'LT) SP2-1 LE 107+80 (567' RT) TO LE 117+26 (178' RT) SP4-1 LW 315+47 (12' RT) TO LW 357+62 (12'RT)		4230				2060 2260									1. EXISTING ANCHORED CONCRETE BARRIER
SP4-2 LW 315+47 TO LW 357+62		4230													2.SEE SDNR2 FOR ADDITIONAL
SP4-3 LW 315+47 (15' RT) TO LW 357+62 (15'RT) SP4-4 LW 315+47 (12' LT) TO LW 357+62 (12'LT)	4	4230													QUANTITIES.
SP4-5 LE 136 +78 (12' LT) TO LE 179+01 (12' LT) SP4-6 LE 136 +78 TO LE 179+01		4230 4230													*** PROJECT TOTAL FOR "REMOVING AND RESETTING EXISITING PERMANENT
SP4-7 LE 136 +78 (12' RT) TO LE 179+01 (12' RT)		4230													BARRIER" IS THE SUMMATION OF THE
SP6-1 LE 174+14 (15' RT) TO LE 174+39 (20' RT) SP7-1 LW 360 +62 (14'LT)					1		25							1,2	PROJECT TOTAL ON THIS SHEET AND SHEET SNDR2.
SP8-1 LW 361+783 (15' RT) SP8-1 LW 366+02 (51' LT) TO AM 52+10 (358'RT)					1	2040									SHELT SINDINZ.
SP8-2 LW 365+87 (21' RT)					1	2040									
SP8-3 LW 370+19 (18' RT)					1										
SP8-4 LW 373+23 (18' RT)					1										
SP8-5 LW 376+23 (12' RT) SP8-6 LW 369+98 (78' RT)					1 1										
SP8-7 LW 374+68 (67' RT)					1										
SP8-8 LW 375+05 (84' RT) SP8-9 LW 376+23 (18' RT)					1										
SP9-1 LW 379+21 (35' LT)					1										
SP9-2 LW 379+23 (12' RT) SP9-3 LW 384+24 (12' RT)					1 1										
SP9-4 LW 379+23 (18' RT) SP9-5 LW384+24 (17' RT)					1										
SHEET TOTAL	4	225 25380			15	6360	25								
PROJECT TOTAL		225 25380		DE0:0:::	15	6360	25								1
DESIGNED BY Z.BILSLAND				REGION NO.	STATE WASH	FED. AID	PROJ. NO.							VAN	I-90 QTSP ⁻
ENTERED BY A. MCLANE CHECKED BY E. WARREN PROJ. ENGR. M. SCULLY				JOB NU 23Y							Vashington S Department	State of Transpoi	rtation		K, SPECIAL REPAIRS & DRAINAGE SHEET 8 OF
REGION ADM. T. BERENDS DATE DATE	REV	/ISION	BY	CONTRA										QUAI	NTITY TABULATION - ALIGNMENT/SITE PREP/UTILITY/ TESC PLAN OF 166 SHEET

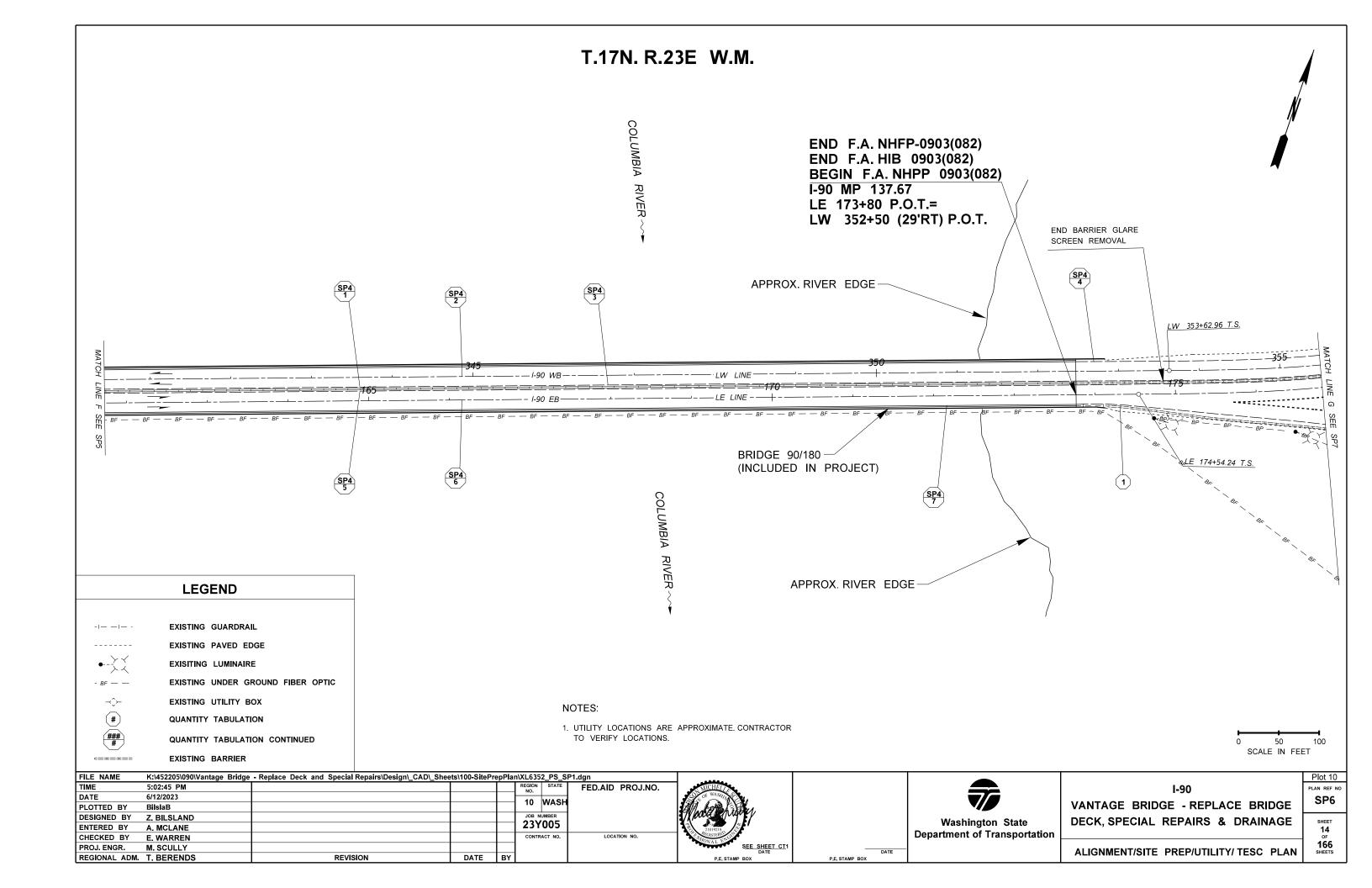


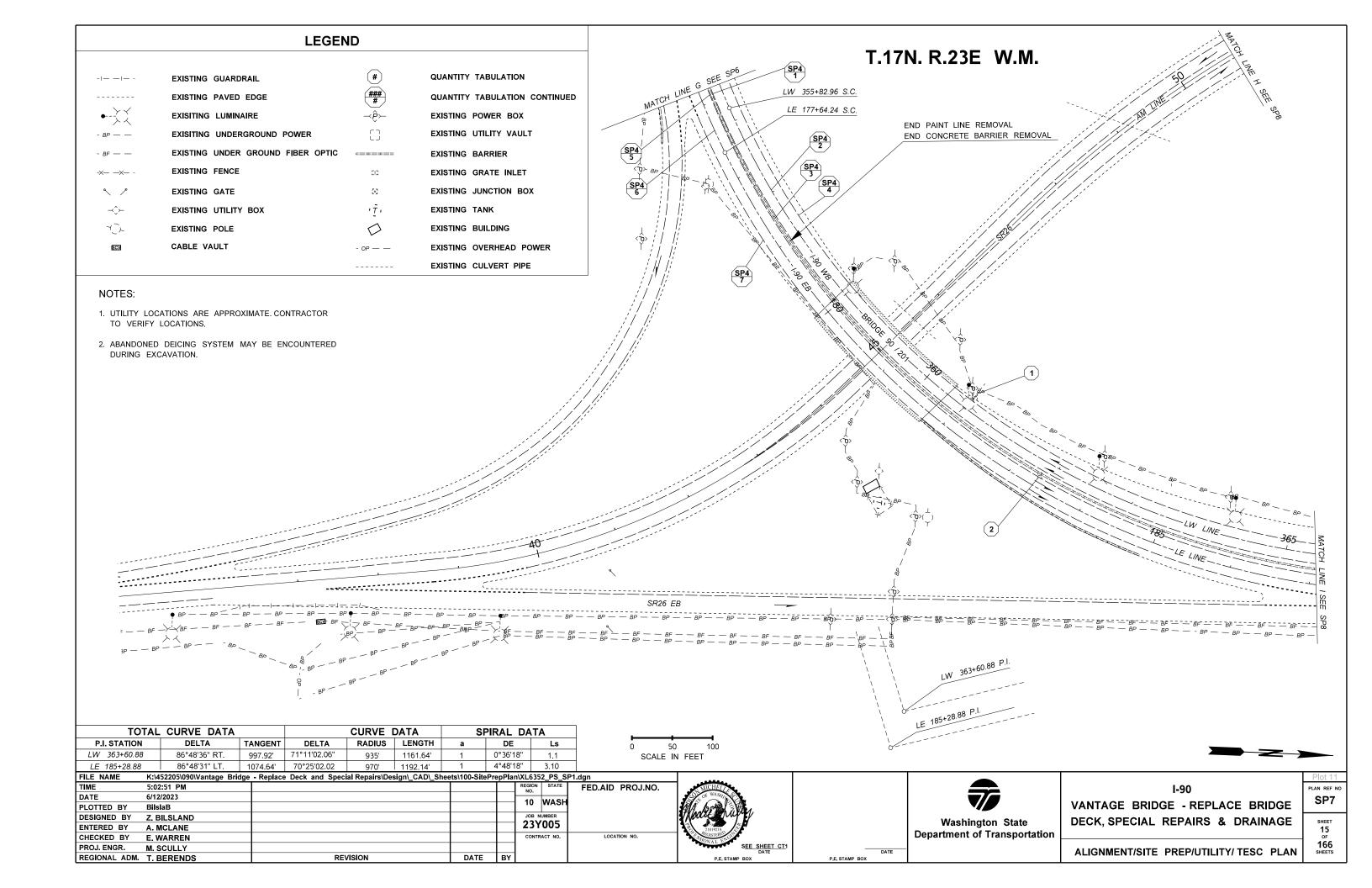


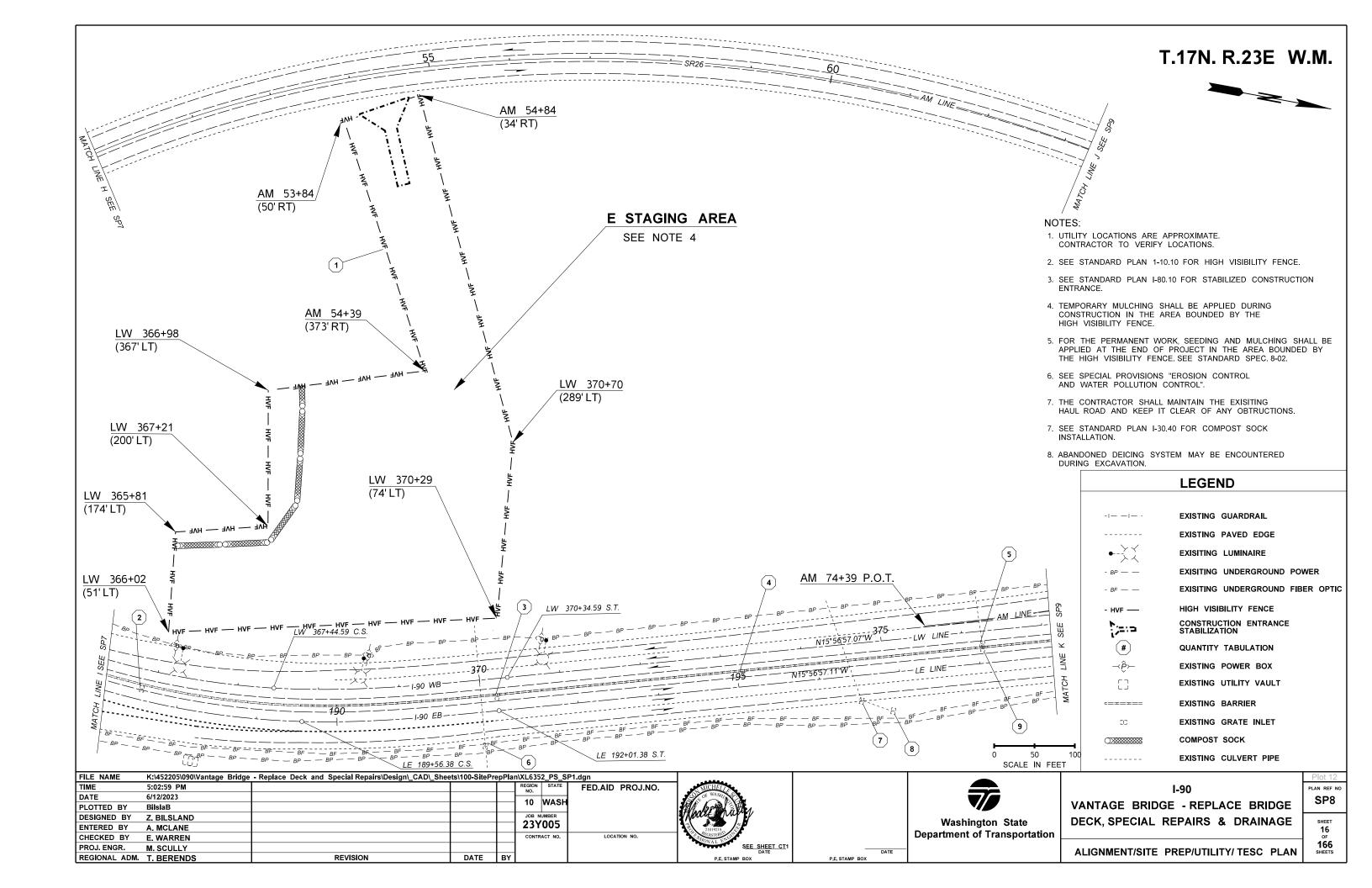


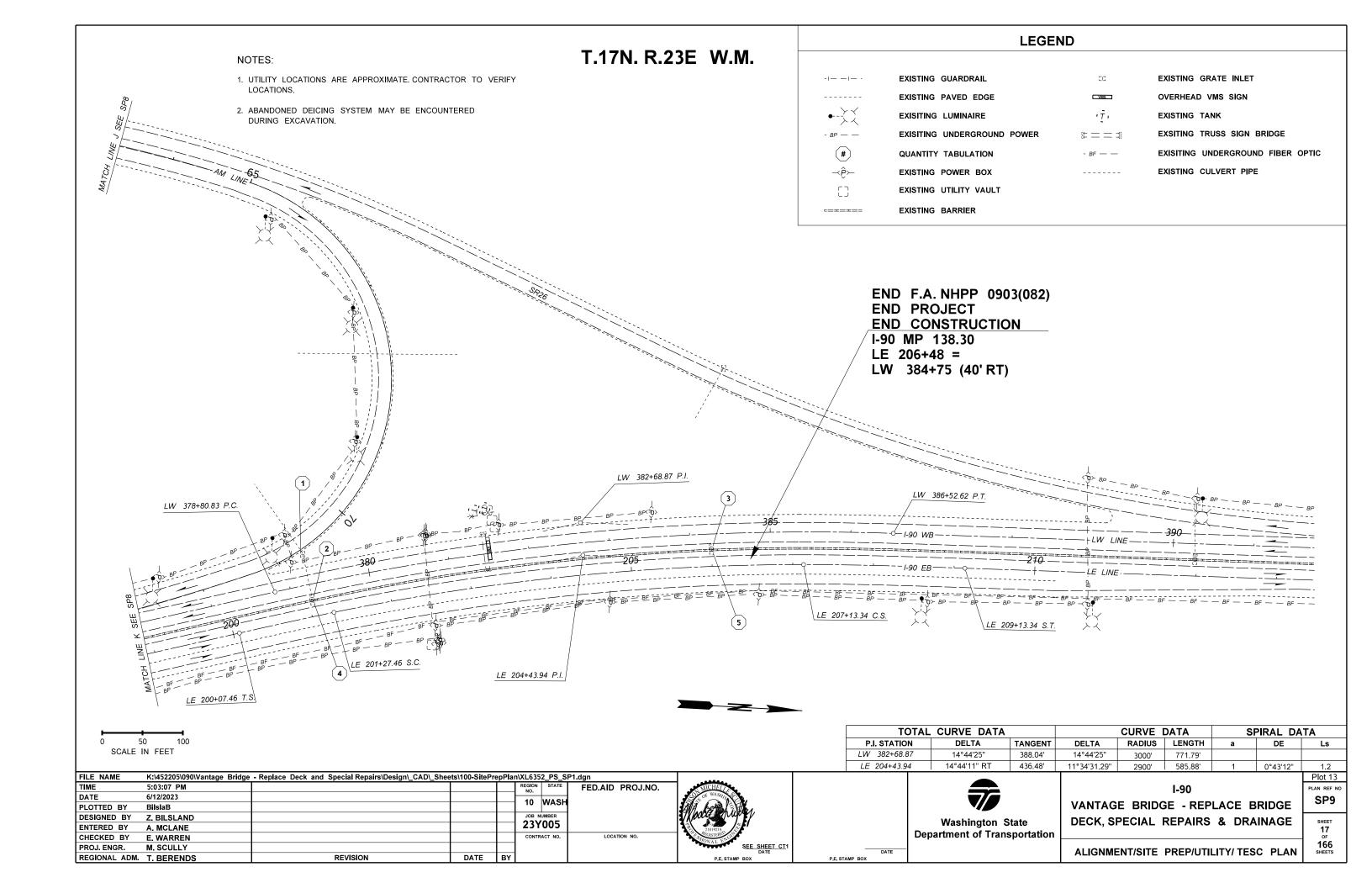






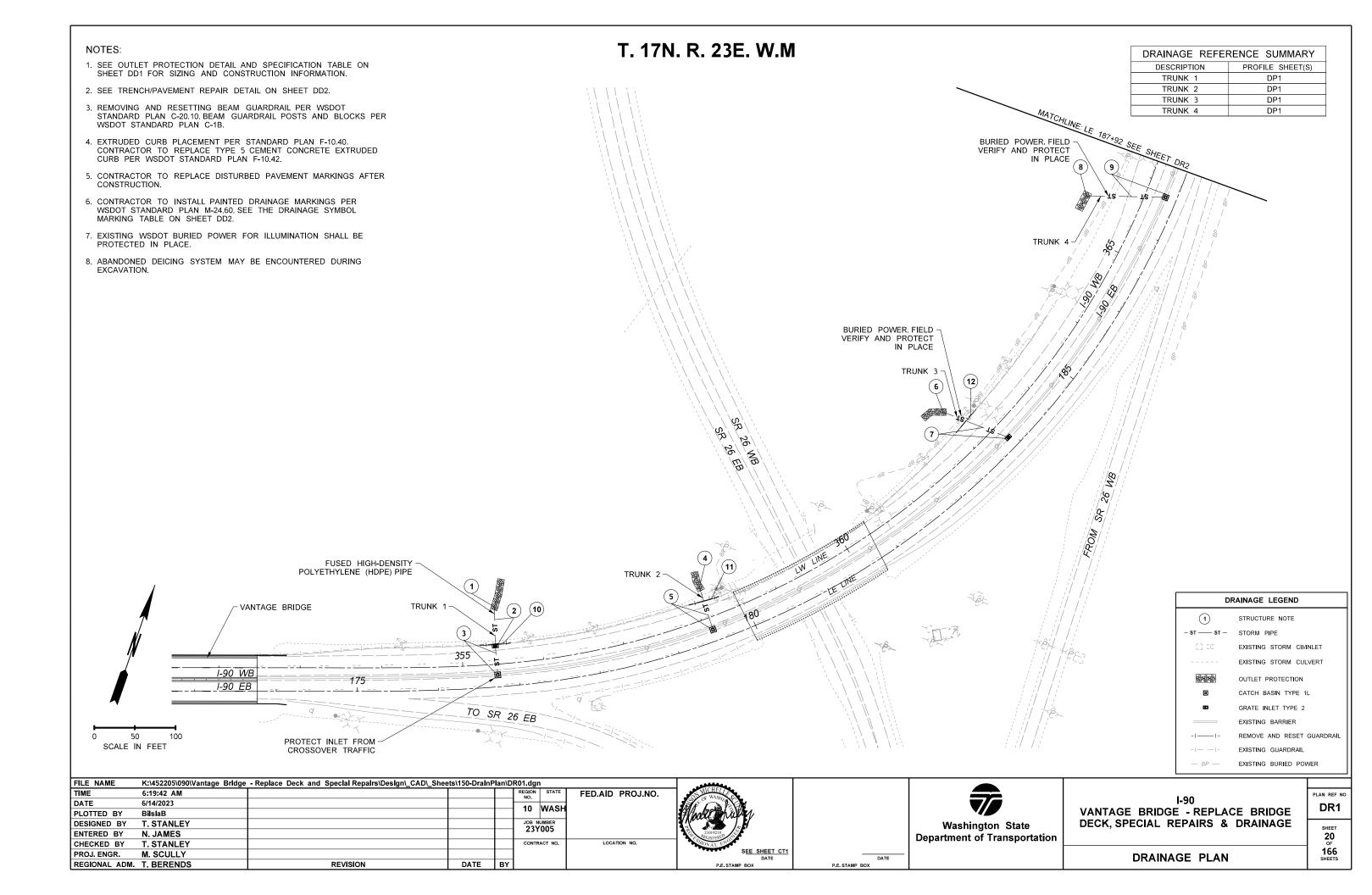






CHECKED I	BY N. JAMES BY T. STANLEY R. M.SCULLY					JOB NU 23Y0							ashington epartment	State of Transpo	rtation		K, SPECIAL REPAIRS & DRAINAGE SHEET 18 OF TURE NOTES - QUANTITY TABULATIONS -
	BY T. STANLEY					10	WASH	FED. AID F	KUJ. NU.								I-90 SNDR 1 TAGE BRIDGE - REPLACE BRIDGE
	PROJECT TOTAL		70	170	7	REGION NO.	9	35 FED. AID P	PROLNO	36	3	371	61	310	742		1
	SHEET TOTAL	1'	70	170	7		9	35		36	3	371	61	310	742		
DR3-3 LE2	206+00.10 (17.61' LT)	1	10	10	1									7	7	2,4,5,7,9,12	(HDPE) PIPE 18 IN. DIAM.
DR3-2 LW	384+26.36 (15.73' RT)		10	10						-				68	68	2,3,9	11 REQUIRES FUSED HIGHDENSITY POLYETHYLENE
DR2-11 LE :	379+34.36 (16.58' RT) 201+04.89 (17.07' LT) 384+24.37 (47.14' LT)		20	20 10	1					5			55 6		55 6	2,9 2,4,5,7,9,12	10. STATION LOCATION AT CENTERLINE OF PIPE. CENTER OF GUARDRAIL AND CURB REPLACEMENT
	198+05.22 (17.10' LT) 378+85.36 (136.12' LT)	1	10	10	1		9							6	6	2,4,5,7,9,12	9. PAINTED DRAINAGE MARKINGS PER WSDOT STANDARD PLAN M24.60. REFER TO DRAINAGE SYMBOL MARKING TABLE ON SHEET DD2
DR2-6 LW	376+20.03 (67.66' LT) 376+24.49 (16.08' RT)		20	20						5				84	84	2,3,9	8. SEE SPECIAL PROVISIONS FOR "ROCK FOR EROSION AND SCOUR PROTECTION"
DR2-4 LE	195+05.66 (17.00' LT)	2	20	20	1					5		105			105	3,4,5,7,9,12	7. WELDED GRATES TYPE "B" FOR GRATE INLET PER WSDOT STANDARD PLAN B40.20
DR2-2 LE	370+05.79 (63.41' LT) 192+01.03 (16.47' LT) 372+64.94 (63.21' LT)	1	10	10	1					5		89			89	3,4,5,7,9,12	
DR1-11 LW	358+11.10 (21.05' LT) 362+16.72 (31.17' LT)															1, 10 1, 10	B35.40
	355+41.82 (21.29' LT)	2	20	20							'			91	91	1, 10	5. GRATE INLET TYPE 2 WSDOT STANDARD PLAN
DR1-8 LW	183+92.60 (13.96' LT) STA. 365+47.49 (65.65' LT) 187+52.67 (13.69' LT)		20	20	1					5	1	86		97	97	3,5,7,9,12	4. SEE SPECIAL PROVISIONS FOR "REMOVAL OF STRUCTURES AND OBSTRUCTIONS"
DR1-6 LW	362+03.82 (58.96' LT)		10	10						6	'	33			33		3. BEVEL PIPE ENDS PER WSDOT STANDARD PLAN B70.20
	358+12.06 (38.99' LT) 179+49.14 (14.38' LT)	1	10	10						5	1	55			55	3,6,9	2. CONNECT TO EXISTING DRAINAGE STRUCTURE
DR1-2 LW	355+41.82 (22.60' LT) STA. 176+73.90 (14.73' LT)	2	20	20	1						1	36		48	48 36	3,4,5,7,9,11 6,12	10.42
	LOCATION	C	.Y.	C.Y.	EACH		C.Y.	C.Y. 35		C.Y.	EACH	L.F.	L.F.	L.F.	Ĺ.F.	8	1. EXTRUDED CURB TYPE 5 PER STANDARD PLAN F-
DESIGNA NO. OR TO THE DRAI	T NUMBER OF THE "CODE TION" BELOW REFERS TO THE SHEET HE SHEET REFERENCE NO. SHOWING INAGE FEATURE. OND NUMBER REFERS TO THE E FEATURE FOUND ON THAT SHEET.	ELAN YOM WOOD OF TO THE		EMBANKMENT COMPACTION	GRATE INLET TYPE 2		ROCK FOR EROSION AND SCOUR PROTECTION CLASS A	ROCK FOR EROSION AND SCOUR PROTECTION CLASS B		QUARRY SPALLS	CATCH BASIN TYPE 1L	SCHEDULE A STORM SEWER PIPE 18 IN. DIAM	HIGH DENSITY POLYETHYLENE (HDPE) PIPE 12 IN. DIAM.	HIGH DENSITY POLYETHYLENE (HDPE) PIPE 18 IN. DIAM.	TESTING STORM SEWER PIPE	SEE GENERAL NOTES	GENERAL NOTES:

OJ. ENGR. M.SCULLY GION ADM. T. BERENDS	DATE DATE	REVISION	BY	23Y(005					- F		STRUCT	TURE NOTES - QUANTITY TABULATIONS - DRAINAGE	C 16 SHE
SIGNED BY T. STANLEY TERED BY N. JAMES ECKED BY T. STANLEY				10 JOB NU	WASH					lashington S	tate f Transportation		I-90 TAGE BRIDGE - REPLACE BRIDGE K, SPECIAL REPAIRS & DRAINAGE	SNE SH I
	SHEET TOTAL PROJECT TOTAL	112.5 112.5	6	112.5 112.5 REGION NO.	337.5 337.5 STATE	400 400 FED. AID PROJ. NO	14 14 0.	6	650 650	4324 4324	136 136			_
	OUEET TOTAL	440.5		440.5	227.5	400	44		050	4004	400			
3-3 LE206+00.10 (17.61' LT)					37.5	40	1		10	33		2,4,5,7,9,12	SHEET AND SHEETS QTSP1 AND QTPM1.	
-2 LW 384+26.36 (15.73' RT)							1		80	519		2,3,9	EXISTING PERMANENT BARRIER" AND "PAINT LINE THE SUMMATION OF THE PROJECT TOTALS ON THI	
11 LE 201+04.89 (17.07' LT) -1 LW 384+24.37 (47.14' LT)					37.5	40	1				14	2,4,5,7,9,12	*** PROJECT TOTALS FOR "REMOVING AND RESET	
10 LW 379+34.36 (16.58' RT)							1		60	399		2,9	12. SEE QTSP1 AND QTPM1 FOR ADDITIONAL QUA	NITIE
2-8 LW 378+85.36 (136.12' LT)											11	8	11. REQUIRES FUSED HIGHDENSITY POLYETHYLENE PIPE 18 IN. DIAM.	(HDP
2-7 LE 198+05.22 (17.10' LT)					37.5		1		00	020		2,4,5,7,9,12	OF GUARDRAIL AND CURB REPLACEMENT	
2-5 LW 376+20.03 (67.66' LT) 2-6 LW 376+24.49 (16.08' RT)					31.3	60	1		80	528	14	2,3,9	MARKING TABLE ON SHEET DD2 10. STATION LOCATION AT CENTERLINE OF PIPE. CI	FNITE
-4 LE 195+05.66 (17.00' LT)					37.5	50	2		80	567	10	3,4,5,7,9,12	PAINTED DRAINAGE MARKINGS PER WSDOT STANDARD PLAN M24.60. REFER TO DRAINAGE SYI MARKING TABLE ON SHEET DD2	MBO
2 LE 192+01.03 (16.47' LT) 3 LW 372+64.94 (63.21' LT)					37.5	50	2		 70	482	15	3,4,5,7,9,12		
-1 LW 370+05.79 (63.41' LT)											15		8. SEE SPECIAL PROVISIONS FOR "ROCK FOR EROSI AND SCOUR PROTECTION"	NC
11 LW 358+11.10 (21.05' LT) 12 LW 362+16.72 (31.17' LT)		37.5 37.5	2 2	37.5 37.5				2 2				1, 10 1, 10	7. WELDED GRATES TYPE "B" FOR GRATE INLET PEF WSDOT STANDARD PLAN B40.20	i
10 LW 355+41.82 (21.29' LT)		37.5	2	37.5	01.0	40	1	2	00	JZ1		1, 10	6. CATCH BASIN TYPE 1L WSDOT STANDARD PLAN	
-8 LW STA. 365+47.49 (65.65' -9 LE 187+52.67 (13.69' LT)	LT)				37.5	40	1		80	527	14	3,4,6,9,12	5. GRATE INLET TYPE 2 WSDOT STANDARD PLAN B	
I-7 LE 183+92.60 (13.96' LT)					37.5	40	1		70	465	1.0	3,5,7,9,12	STRUCTURES AND OBSTRUCTIONS"	
-5 LE 179+49.14 (14.38' LT) -6 LW 362+03.82 (58.96' LT)					37.5	40	1		50	317	18	3,6,9	4. SEE SPECIAL PROVISIONS FOR "REMOVAL OF	
1-4 LW 358+12.06 (38.99' LT)	,								-		14	-,	3. BEVEL PIPE ENDS PER WSDOT STANDARD PLAN I	B70.2
-2 LW 355+41.82 (22.60' LT) -3 LE STA. 176+73.90 (14.73'	LT)				37.5	40	1		70	487		3,4,5,7,9,11 6,12	2. CONNECT TO EXISTING DRAINAGE STRUCTURE	
DE LOCATION ∀ \ UNIT O 1-1 LW 355+44.53 (70.56' LT)	F MEASURE ≻	L.F.	EACH	L.F.	L.F.	L.F.	EACH	EACH	C.Y.	S.F.	S.Y. 21	8	1. EXTRUDED CURB TYPE 5 PER STANDARD PLAN F	10.42
D. OR THE SHEET REFERENC HE DRAINAGE FEATURE. HE SECOND NUMBER REFERS RAINAGE FEATURE FOUND ON	S TO THE SHEET E NO. SHOWING S TO THE N THAT SHEET.	EXTRUDED CURB	BEAM GUARDRAIL BLOCK	REMOVING AND RESETTING BEAM GUARDRAIL	REMOVING AND RESETTING EXISTING PERMANENT BARRIER***	PAINT LINE***	PAINTED DRAINAGE MARKING	BEAM GUARDRAIL POST	STRUCTURE EXCAVATION CLASS BINCL. HAUL	SHORING OR EXTRA EXCAVATION CLASS B	CONSTRUCTION GEOTEXTILE FOR PERMANENT EROSION CONTROL	SEE GENERAL NOTES		
OTE: E FIRST NUMBER OF THE "CO SIGNATION" BELOW REFERS							Ō				Ш		GENERAL NOTES:	

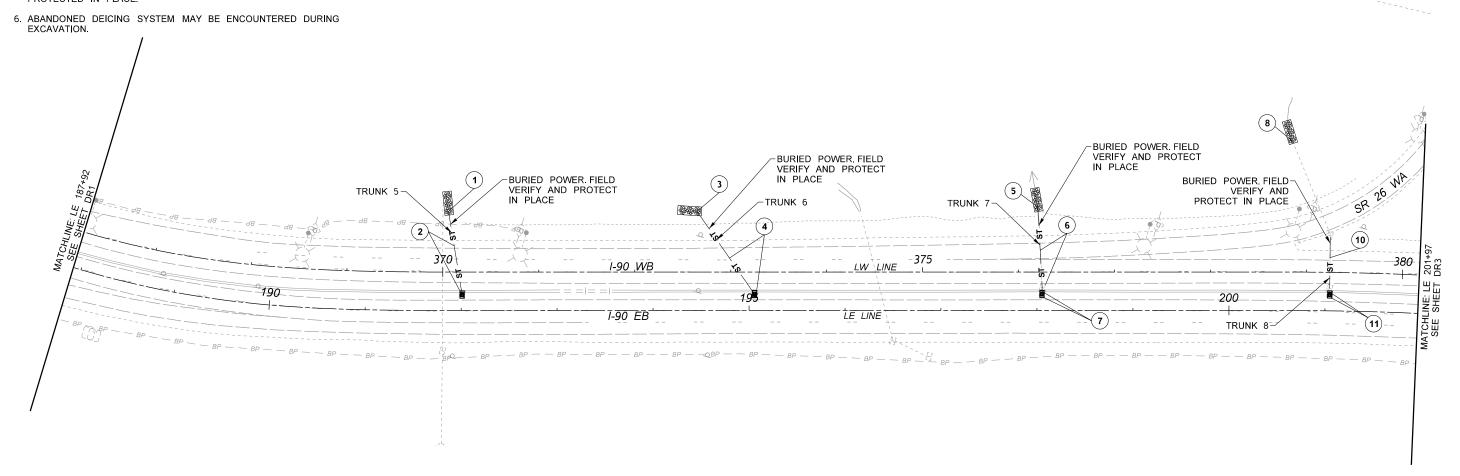


NOTES:

- 1. SEE OUTLET PROTECTION DETAIL AND SPECIFICATION TABLE ON SHEET DD1 FOR SIZING AND CONSTRUCTION INFORMATION.
- 2. SEE TRENCH/PAVEMENT REPAIR DETAIL ON SHEET DD2.
- 3. CONTRACTOR TO REPLACE DISTURBED PAVEMENT MARKINGS AFTER CONSTRUCTION
- 4. CONTRACTOR TO INSTALL PAINTED DRAINAGE MARKINGS PER WSDOT STANDARD PLAN M-24.60. SEE THE DRAINAGE SYMBOL MARKING TABLE ON SHEET DD2.
- 5. EXISTING WSDOT BURIED POWER FOR ILLUMINATION SHALL BE PROTECTED IN PLACE.



DRAINAGE REFER	RENCE SUMMARY
DESCRIPTION	PROFILE SHEET(S)
TRUNK 5	DP2
TRUNK 6	DP2
TRUNK 7	DP2
TRUNK 8	DP2



DE	RAINAGE LEGEND
	WINDE ELOCID
(1)	STRUCTURE NOTE
– st —— st –	STORM PIPE
C3 55	EXISTING STORM CB/INLET
	EXISTING STORM CULVERT
	OUTLET PROTECTION
•	CATCH BASIN TYPE 1L
100	GRATE INLET TYPE 2
	EXISTING BARRIER
-11-	REMOVE AND RESET GUARDRAIL
-11-	EXISTING GUARDRAIL
— ВР —	EXISTING BURIED POWER

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FILE NAME	K:\452205\090\Vantage Bridge	- Replace Deck and Special Repairs\Design_CAD_Shee	ts\150-DraInP	lan\D	R02.dgr	1	
TIME	6:31:36 AM				REGION NO.	STATE	FED.AID PROJ.NO.
DATE	6/14/2023					WASH	
PLOTTED BY	BilslaB				יי ן	WASH	
DESIGNED BY	T. STANLEY					UMBER 1005	
ENTERED BY	N. JAMES				231	005	
CHECKED BY	T. STANLEY				CONTR	ACT NO.	LOCATION NO.
PROJ. ENGR.	M. SCULLY						
REGIONAL ADM.	T. BERENDS	REVISION	DATE	BY			





DATE

		I-9	0				
VANTAGE	BRID	GE -	REPI	LAC	Œ	BRID	OGE
DECK, SPE	CIAL	REP	AIRS	&	DF	RAINA	٩GE

DRAINAGE PLAN

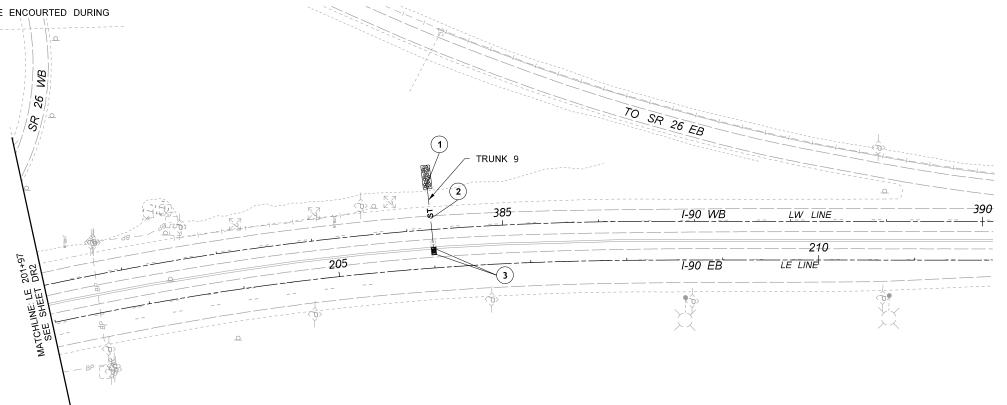
SHEET 21
0F
166
SHEETS

PLAN REF NO

T. 17N. R. 23E. W.M

DRAINAGE REFER	RENCE SUMMARY
DESCRIPTION	PROFILE SHEET(S)
TRUNK 9	DP3

- 1. SEE OUTLET PROTECTION DETAIL AND SPECIFICATION TABLE ON SHEET DD1 FOR SIZING AND CONSTRCTION INFORMATION.
- 2. SEE TRENCH/PAVEMENT REPAIR DETAIL ON SHEET DD2.
- 3. CONTRACTOR TO REPLACE DISTURBED PAVEMENT MARKINGS AFTER CONSTRUCTION.
- 4. CONTRACTOR TO INSTALL PAINTED DRAINAGE MARKINGS PER WSDOT STANDARD PLAN M-24.60. SEE THE DRAINAGE SYMBOL MARKING TABLE ON SHEET DD2.
- 5. EXISTING WSDOT BURIED POWER FOR ILLUMINATION SHALL BE PROTECTED IN PLACE.
- 6. ABANDONED DEICING SYSTEM MAY BE ENCOURTED DURING EXCAVATION.



DF	RAINAGE LEGEND
1	STRUCTURE NOTE
- st st -	STORM PIPE
C3 OC	EXISTING STORM CB/INLET
	EXISTING STORM CULVERT
	OUTLET PROTECTION
•	CATCH BASIN TYPE 1L
	GRATE INLET TYPE 2
	EXISTING BARRIER
-11-	REMOVE AND RESET GUARDRAIL
- -	EXISTING GUARDRAIL
— ВР —	EXISTING BURIED POWER

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-			
ō	50	10	0
	SCALE IN	FEET	

PLAN REF NO DR3

FILE NAME	K:\452205\090\Vantage Bridge	- Replace Deck and Special Repairs\Design_CAD_Shee	ets\150-DraInP	lan\D	R03.dgr	1		Т
TIME	6:34:22 AM				REGION NO.	STATE	FED.AID PROJ.NO.	٦.
DATE	6/14/2023					WASH		Į
PLOTTED BY	BilslaB				10	WASH		4
DESIGNED BY	T. STANLEY					UMBER		Į,
ENTERED BY	N. JAMES				231	005		1
CHECKED BY	T. STANLEY				CONTR	ACT NO.	LOCATION NO.	7
PROJ. ENGR.	M. SCULLY							
REGIONAL ADM.	T. BERENDS	REVISION	DATE	BY				

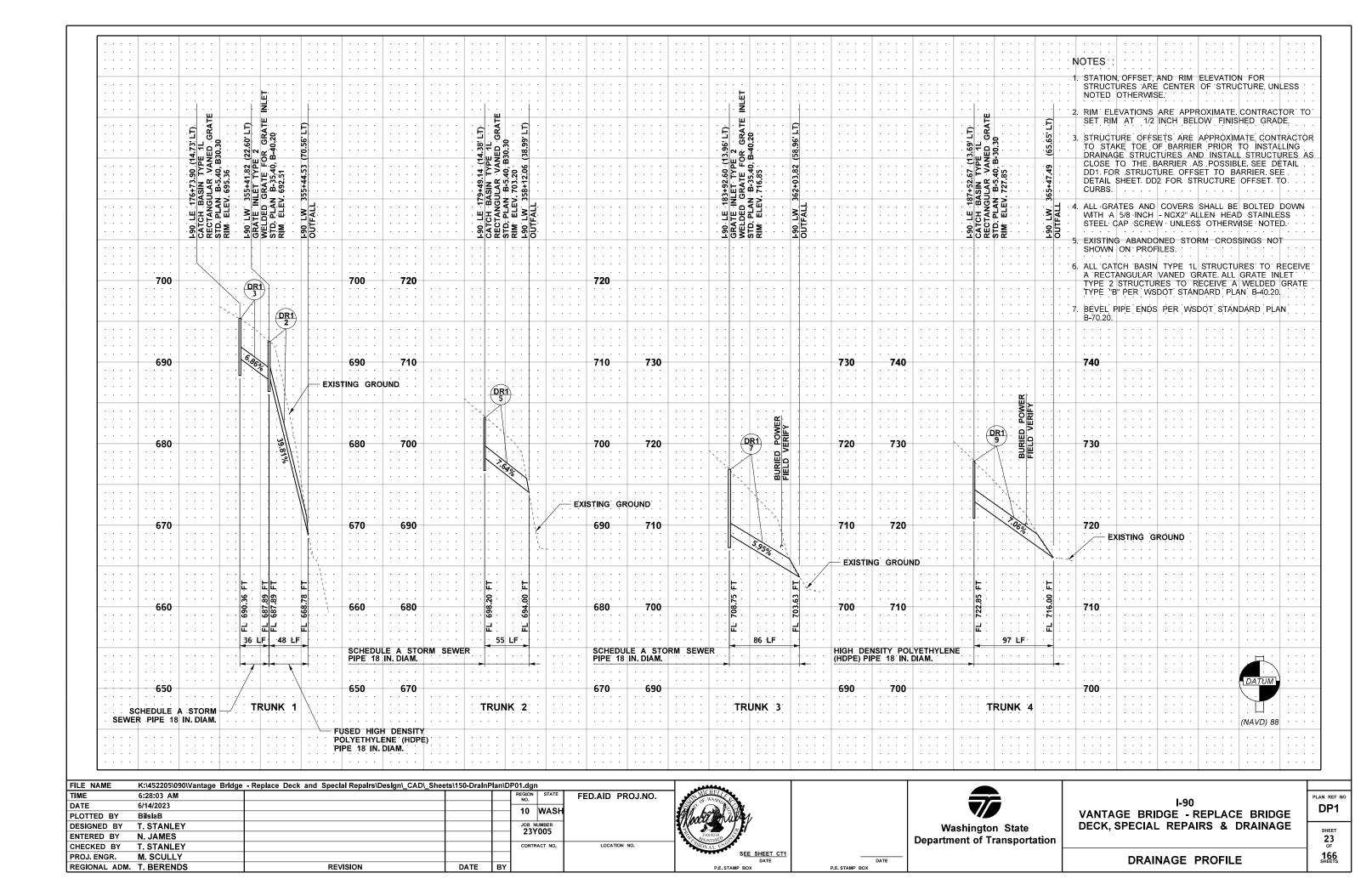


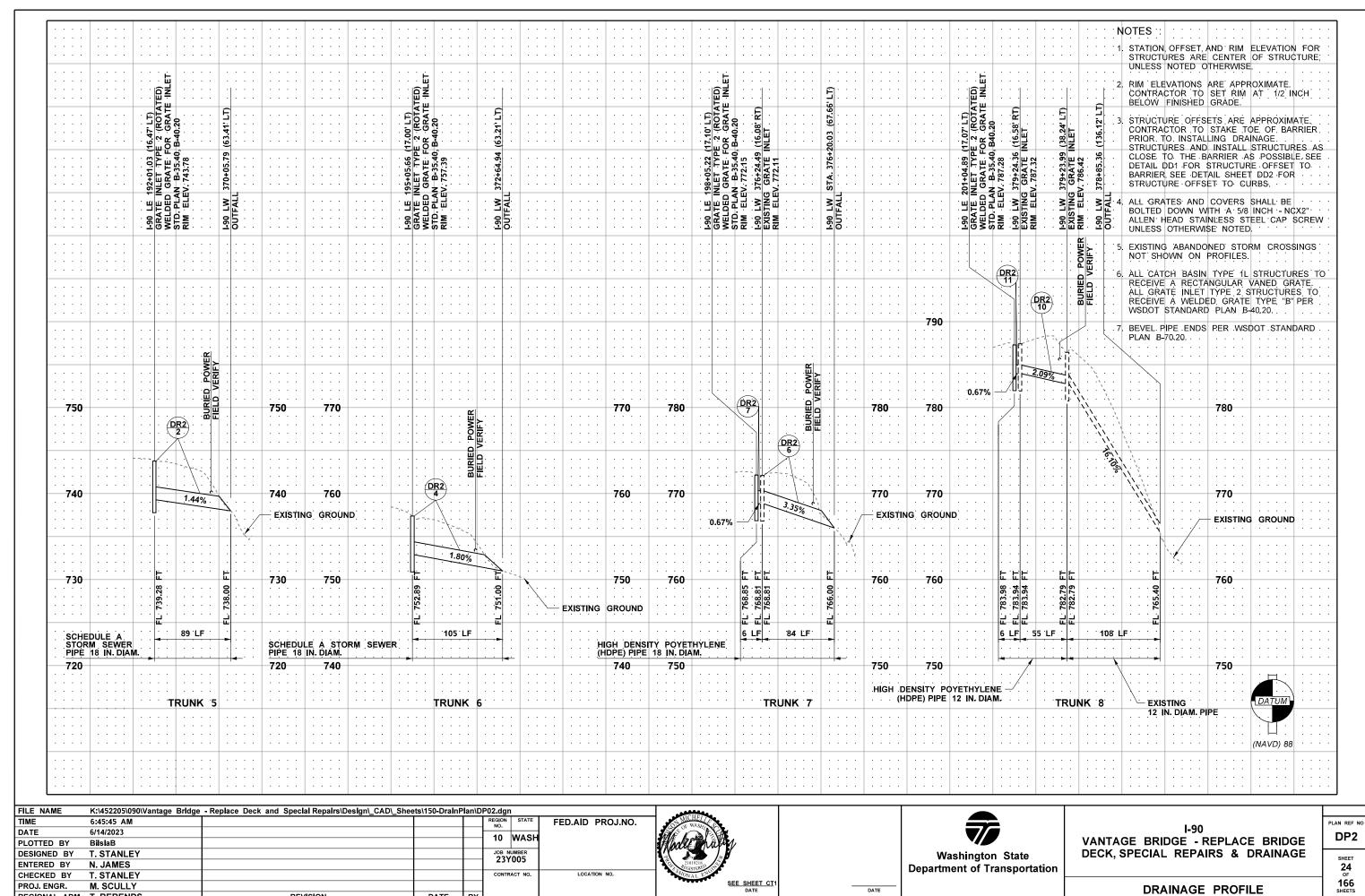


DATE

I-90										
VANTAGE	BRIDGE	- REPL	ACE	BRIDGE						
DECK, SPE	CIAL RE	PAIRS	& DI	RAINAGE						

SHEET 22 OF 166 SHEETS DRAINAGE PLAN





DATE

PROJ. ENGR.

M. SCULLY

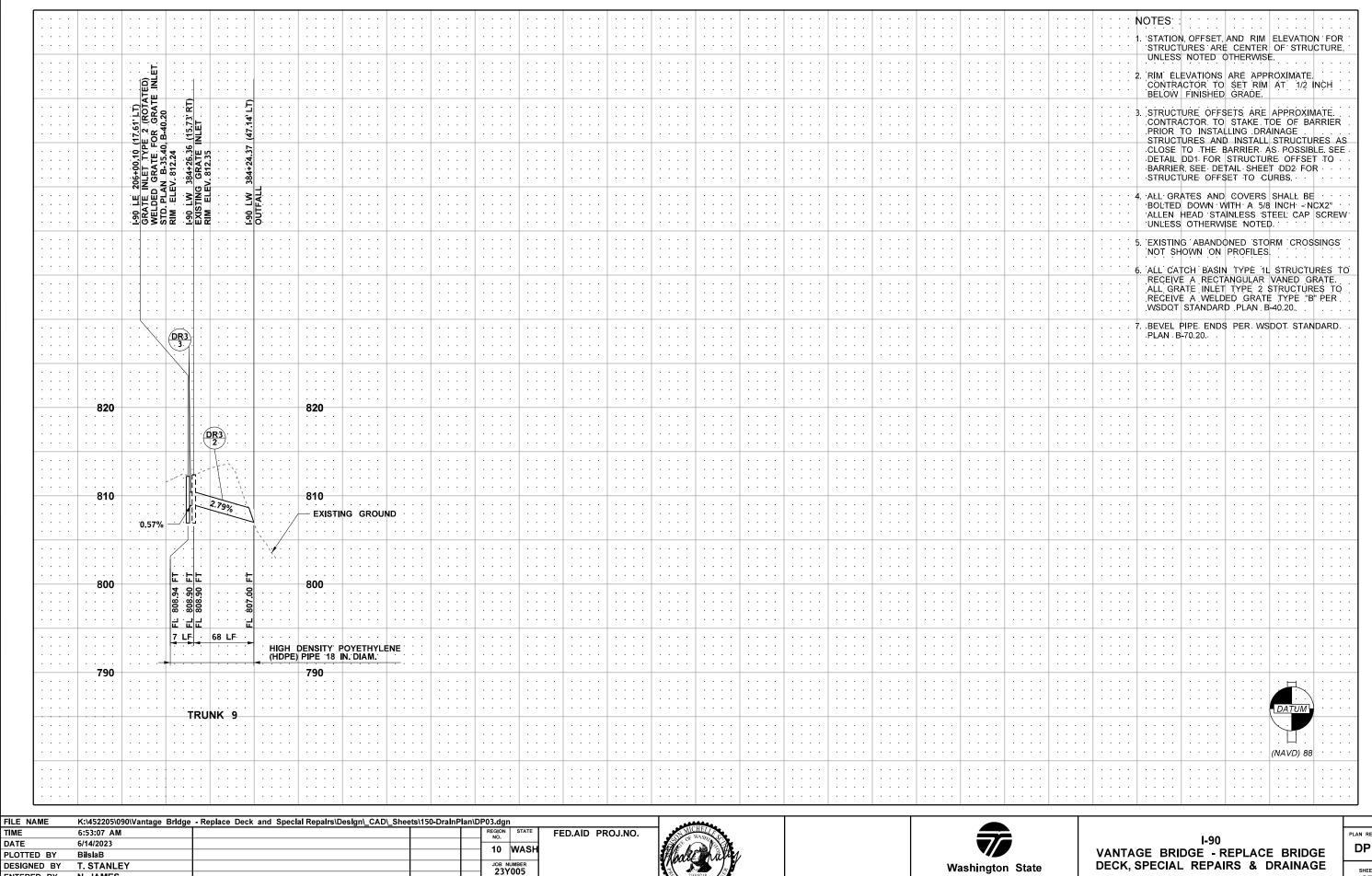
REGIONAL ADM. T. BERENDS

DATE

BY

REVISION

DRAINAGE PROFILE



CONTRACT NO

DATE

ВΥ

REVISION

LOCATION NO.

N. JAMES

T. STANLE

M. SCULLY

REGIONAL ADM. T. BERENDS

ENTERED BY

CHECKED BY

PROJ. ENGR.

DATE

SEE SHEET CT1

Washington State **Department of Transportation**

DECK, SPECIAL REPAIRS & DRAINAGE

DRAINAGE PROFILE

DP3

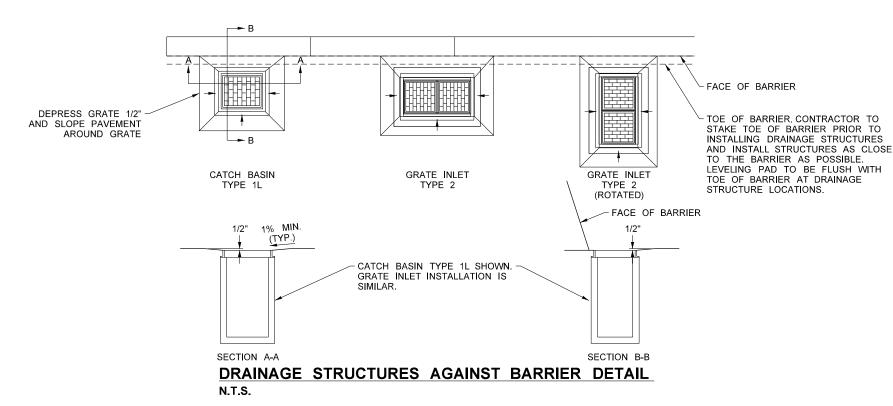
25 OF 166 SHEETS

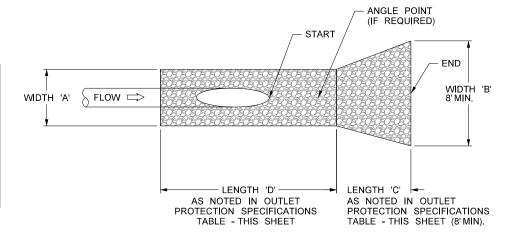
OUTLET PROTECTION SPECIFICATION TABLE

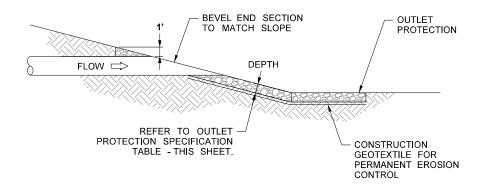
STRUCTURE ID	PIPE DIAM.	WB I-90 STA. START	ANGLE POINT	END	WIDTH 'A' (FT)	WIDTH 'B' (FT)	LENGTH 'C' (FT)	LENGTH 'D' (FT)	DEPTH (FT)
DR1-1	18" PIPE	LW 355+43.30 (67.10'LT)	LW 355+51.15 (85.01'LT)	LW 355+56.47 (103.74'LT)	4.5	9	8	30	4.75
DR1-4	18" PIPE	LW 358+12.99 (34.65'LT)	LW 358+11.17 (45.67'LT)	LW 358+13.04 (58.78'LT)	4.5	9	8	16	1
DR1-6	18" PIPE	LW 362+06.78 (56.21'LT)	LW 361+92.34 (69.42'LT)	LW 361+78.88 (70.27'LT)	4.5	9	8	23	1
DR1-8	18" PIPE	LW 365+52.50 (65.74'LT)		LW 365+26.64 (67.08'LT)	4.5	9	8	16	1
DR2-1	18" PIPE	LW 370+06.61 (59.43'LT)		LW 370+04.09 (83.98'LT)	4.5	9	8	17	1
DR2-3	18" PIPE	LW 372+69.64 (63.15'LT)		LW 372+44.77 (64.65'LT)	4.5	9	8	17	1
DR2-5	18" PIPE	LW 376+20.03 (67.66'LT)		LW 376+16.76 (87.46'LT)	4.5	9	8	16	1
DR2-8	12" PIPE	LW 378+86.11 (134.11'LT)		LW 378+78.98 (157.65'LT)	3	8	8	16	2.5
DR3-1	18" PIPE	LW 384+24.90 (42.53'LT)		LW 384+23.89 (67.19'LT)	4.5	9	8	16	1

NOTES:

- 1. CONTRACTOR TO CONSTRUCT OUTLET PROTECTION AS SHOWN ON THE PLANS AND PER THE INFORMATION IN THE OUTLET PROTECTION SPECIFICATION TABLE ABOVE. START AND END STATIONING PROVIDED. ANGLE POINT INFORMATION PROVIDED FOR OUTLET PROTECTION THAT REQUIRE FOLLOWING THE DISCHARGE FLOWPATH DOWN THE NATURAL CONTOURS OF THE AREA.
- 2. IF UPON INSPECTION THE EXISTING OUTLET PROTECTION MEETS OR EXCEEDS THE MINIMUM REQUIREMENTS OUTLINED IN THE OUTLET PROTECTION SPECIFICATION TABLE ABOVE FOR ANY SITE LOCATION, THE CONTRACTOR HAS THE OPTION TO REUSE SOME OR ALL OF THE EXISTING OUTLET PROTECTION, AND MODIFY OR SUPPLEMENT AS REQUIRED. CONCURRENCE FROM THE WSDOT ENGINEER IS REQUIRED PRIOR TO WORK AND ACCEPTANCE.
- 3. START, END, AND ANGLE POINT STATIONING AT CENTERLINE OF OUTLET PROTECTION.







OUTLET PROTECTION N.T.S.

FILE NAME	K:\452205\090\Vantage Brldge	- Replace Deck and Special Repairs\Design_CAD_Shee	ets\150-DraInF	Plan\D	D01.dg	n		
TIME	6:42:22 AM				REGION NO.	STATE	FED.AID PROJ.NO.	1
DATE	6/14/2023				10	WASH		1
PLOTTED BY	McLaneA				10	WASH		
DESIGNED BY	T. STANLEY					NUMBER 1005		- 137
ENTERED BY	N. JAMES				231	1005		- 13
CHECKED BY	T. STANLEY				CONTI	RACT NO.	LOCATION NO.	7
PROJ. ENGR.	M. SCULLY							
REGIONAL ADM.	T. BERENDS	REVISION	DATE	BY				





DATE

I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

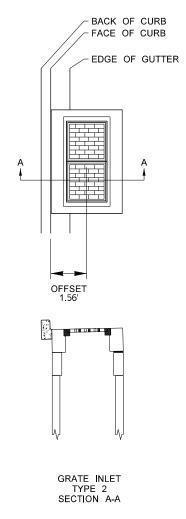
DD1

SHEET
26
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166

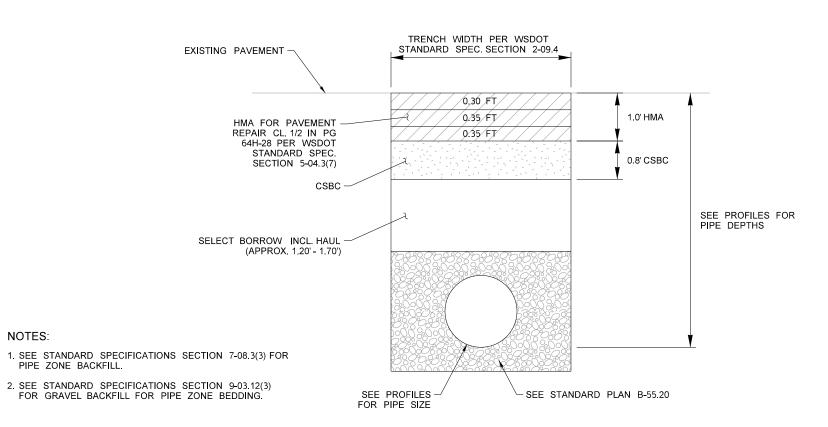
DRAINAGE SYMBOL MARKING TABLE

TRUNK	ALIGNMENT	START	DRAINAGE MARKING
TRUNK 1	LW	355+41.86 (17.04'LT)	DRAINAGE STRUCTURE INLET
TRUNK 2	LW	358+10.81 (14.39'LT)	CROSS CULVERT
TRUNK 3	LW	362+23.83 (14.56' LT)	CROSS CULVERT
TRUNK 4	LW	365+67.77 (19.02'LT)	CROSS CULVERT
TRUNK 5	LE	192+01.05 (10.73'LT)	DRAINAGE STRUCTURE INLET
TRUNK 5	LW	370+12.17 (24.87' LT)	CROSS CULVERT
TRUNK 6	LE	195+05.66 (11.11'LT)	DRAINAGE STRUCTURE INLET
TRUNK 6	LW	372+91.33 (25.17'LT)	CROSS CULVERT
TRUNK 7	LE	198+05.14 (11.07'LT)	DRAINAGE STRUCTURE INLET
TRUNK 7	LW	376+22.02 (30.14'LT)	CROSS CULVERT
TRUNK 8	LE	201+04.89 (9.81'LT)	DRAINAGE STRUCTURE INLET
TRUNK 8	LW	379+24.24 (12.64'LT)	CROSS CULVERT
TRUNK 9	LE	206+00.07 (11.28'LT)	DRAINAGE STRUCTURE INLET
TRUNK 9	LW	384+25.40 (14.34'LT)	CROSS CULVERT

STATION LOCATIONS TAKEN AT FOG LINE. REFER TO WSDOT STANDARD PLAN M-24.60 FOR SYMBOL PLACEMENT.



DRAINAGE STRUCTURE AGAINST STANDARD CURB N.T.S.



TRENCH/PAVEMENT REPAIR DETAIL N.T.S.

FILE NAME	K:\452205\090\Vantage Bridge	- Replace Deck and Special Repairs\Design_CAD_Shee	ts\150-DrainF	lan\D	D02.dg	n	
TIME	6:48:46 AM				REGION NO.	STATE	FED.AID PROJ.NO.
DATE	6/14/2023				10	WASH	
PLOTTED BY	McLaneA				יי ן	WASH	
DESIGNED BY	T. STANLEY					NUMBER	
ENTERED BY	N. JAMES				231	/005	
CHECKED BY	T. STANLEY				CONTI	RACT NO.	LOCATION NO.
PROJ. ENGR.	M. SCULLY				1		
REGIONAL ADM.	T. BERENDS	REVISION	DATE	BY	1		



NOTES:



I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

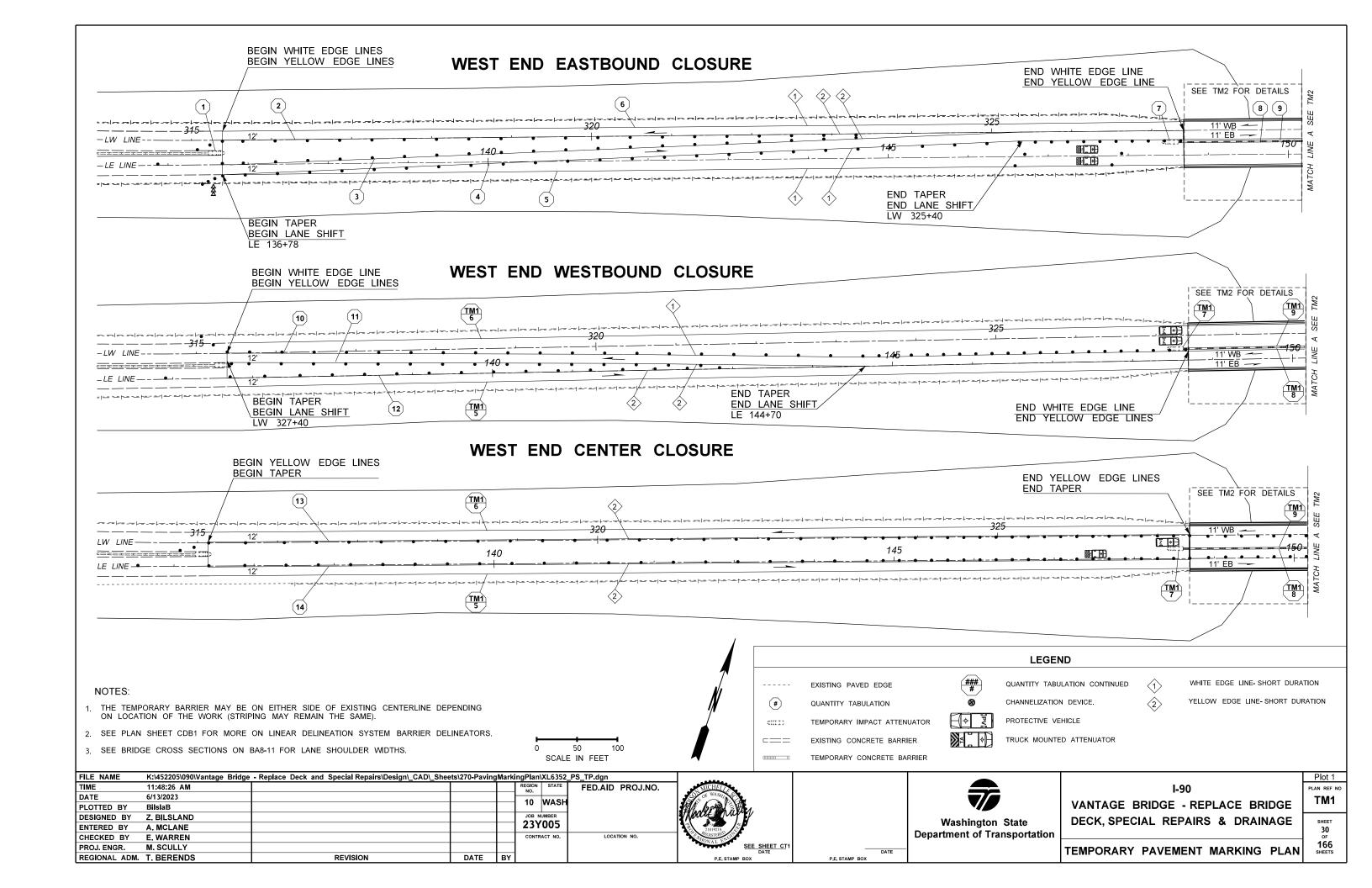
DRAINAGE DETAIL

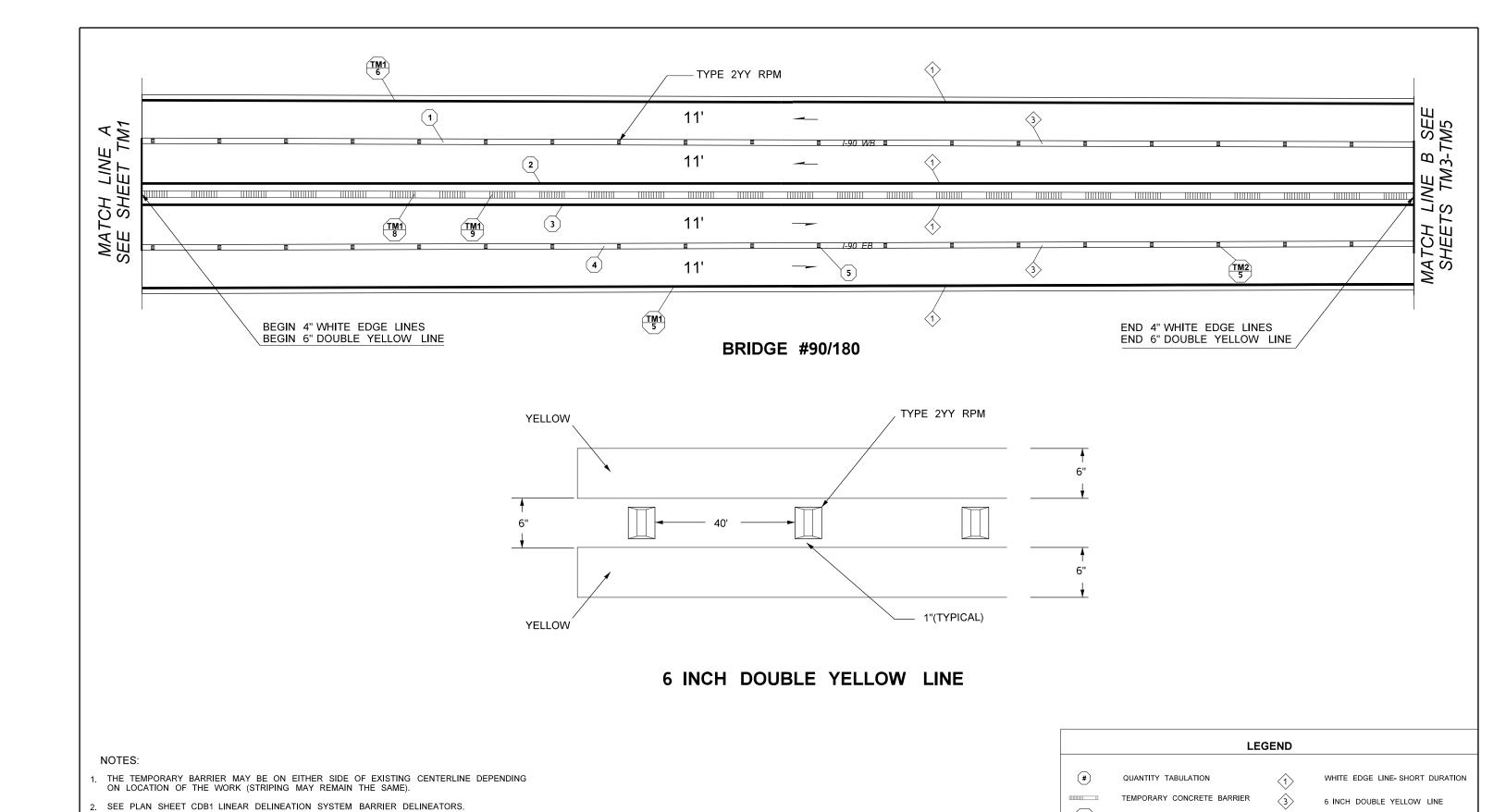
27 OF 166 SHEETS

PLAN REF NO DD2

			QUA	NTI	TY TA	ABUL	.ATIC	N - TE	EMPOR	ARY	MARK	ING F	PLAN		
REFERS TO THE SECOND NUMBER OF SECOND NU		PORARY BARRIER	MPORARY IMPACT TENUATOR	RESETTING IMPACT ATTENUATOR		RAISED PAVEMENT MARKER TPYE 2	FEMPORARY PAVEMENT MARIKING - SHORT DURATION	TEMPORARY MISC. PAVEMENT MARKINGS - SHORT DURATION	BARRIER DELINEATOR***	TEMPORARY BARRIER GLARE SCREEN				GENERAL NOTES	GENERAL NOTES:
		TEM	TE AT	RES				TEM	rds					SEE	
CODE LOCATIO	ON ✓ \ UNIT OF MEASURE >	L.F.	EACH	EACH		HUND	L.F.		EACH	L.F.					
M1-1 LE 136+78 (M1-2 LW 315+47 M1-3 LE 136+78 T	TO LW 327+40		1	2			30970 25770							6 1 1	1. MULTIPLE TRAFFIC SHIFTS REQUIRED FOR THE CONSTRUCTION SEQUENCE DETAILS SHOWN ON SHEET BA7. PROJECT
M1-4 LE 136+78 (12' RT) TO LE 148+70 (11' RT) 12' RT) TO LE 179+01 12' RT)						30970 15170							1 1	QUANTITIES ACCOUNT FOR ALL TRAFFIC SHIFTS REQUIRED DURING THE PROJECT.
M1-6 LW 315+47 ((12' LT) TO LW 357+62 (12'LT)		1	3			15170							1 6	2. SEE PLAN SHEET "CBD1" FOR MORE ON
TM1-8 LE 148+45 (° TM1-9 LE 148+70 (°	15' LT) TO LE 174+02 (15' LT) 15' LT) TO LE 173+77 (15' LT)	7637.5		-			20070		1555					1,2,3 2,3,4,7	LDS BARRIER DELINEATORS.
M1-10 LW 315+47	TO LW 352+47 (15' RT) TO LE 144+70						30970 20520							1	3. WHITE LDS BARRIER DELINEATOR PANEL.
M1-12 LE 136+78 T M1-13 LW 315+47 ⁻ M1-14 LE 136+78 T	TO LW 327+40						30970 30970 30970							1 1 1	4. SEE SPECIAL PROVISION "LDS BARRIER
M2-1 LW 327+40	TO LW 352+47						5010							1	DELINEATOR"
	(11' RT) TO LW 352+47 (11' RT) 11' LT) TO LE 173+77 (11' LT)						5010 5840 5840							1 1 1	5. TYPE 2YY RAISED PAVEMENT MARKER
M2-5 LE 148+70 T	O LE 173+77					4	3040							5	SEE STANDARD PLAN M-20.30.
M3-3 LE 170+38 (2	RT TO LW 357+62 29' LT) TO LE 179+01		1	4			12190 19850							6 1 1	6. SEE SPECIAL PROVISIONS "IMPACT ATTENUATOR SYSTEMS".
M3-4 LE 170+26 (°	18' LT) TO LE 174+14 (13' RT)		1	2			8930							6	7. SEE SHEETS QTPM1 FOR ADDITIONAL
M3-6 LE 174+54 to	o LE 179+01		'				10290							1	QUANTITIES.
「M4-1 LE 173+77 (「M4-2 LE 175+91 T 「M4-3 LE 173+77 T							13630 15550 13630							1 1 1	8. SEE SPECIAL PROVISION "GLARE SCREEN."
M5-1 LW 352+47 M5-2 LE 173+77 T	TO LW 357+62 TO 179+01						13390 13630							1 1	- SCILLIV.
TM6-1 LW 315+47							13130								
	(12' RT) TO LW 327+40 (12'RT) 12'LT) TO LE 148+70 (12' LT)						13130 13130				+ +			1 1	-
M6-4 LE 136+78 T		7637.5	4	11		4	13130 457760		1555					1	
ESIGNED BY Z.BI					REGION NO.	WASH	FED. AID	PROJ. NO.				abinata: O'			I-90 QTT ITAGE BRIDGE - REPLACE BRIDGE EK, SPECIAL REPAIRS & DRAINAGE SHE
ROJ. ENGR. M. S	ARREN SCULLY				23Y	JMBER 005 ACT NO.					De De	isnington Sta partment of	ite Transportation		2.
EGION ADM. T. B	DATE DATE	REVISION		BY	CONTRA	ACT NU.								QUANTITY	TABULATION - TEMPORARY MARKING PLAN 16 SHE

## PROFIT OF THE	OJ. ENGR. M. SCULLY GION ADM. T. BERENDS
COMPAND CONTINUE	TERED BY A.MCLANE
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DE LOCATION \(\) UNIT OF MEASURE \(\) E. EACH HUND L.F. EACH HUND L.F.	
DE LOCATION Y UNIT OF MEASURE >	1-9 LE 133+00 (22'LT) TO LE 174+89 (15'LT
DE LOCATION Y 1 UNIT OF MEASURE > L.F. EACH HUND L.F. EACH L.F. EACH L.F.	1-8 LE 136+78 (14' LT) TO LE 148+70 (14'
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Life Each Each Each Each Hund Life Each Each Each Each Hund Life Each Life Each Each Each Each Hund Life Each	5 LE 136+78 (12' LT) TO LW 179+01 (12'
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DE LOCATION	6-8 LE 173+77 (11' LT) TO LE 179+01 (12' L
DE LOCATION Y \ UNIT OF MEASURE > L.F. EACH EACH HUND L.F. EACH L.F. 1. MULTIPLE TRAFFIC SHIFTS REQUIR 6-5 LE 178+70 TO 173+77 80 EOR THE CONSTRUCTION SEQUENCE	
DE LOCATION → \ UNIT OF MEASURE > L.F. EACH EACH HUND L.F. EACH L.F.	
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FERENCE NO. SHOWING THE	FERENCE NO. SHOWING THE
GENERAL NOTES: OTE: HE FIRST NUMBER OF THE "CODE" BELOW FFERS TO THE SHEET NO. OR THE SHEET FFERS TO SHOWING THE HE FIRST NO. SHOWING THE HE FIRST NOTES: SEPTEMBLE NOTES: WARRY NO 1	IE FIRST NUMBER OF THE "CODE" BELO
GENERAL NOTES:	





K:\452205\090\Vantage Bridge - Replace Deck and Special Repairs\Design_CAD_Sheets\270-PavingMarkingPlan\XL6352_PS_TP.dgn FILE NAME TIME 11:48:39 AM FED.AID PROJ.NO. DATE 6/13/2023 10 WASH PLOTTED BY BilslaB DESIGNED BY Z. BILSLAND 23Y005 ENTERED BY A. MCLANE CHECKED BY E. WARREN CONTRACT NO. LOCATION NO. PROJ. ENGR. M. SCULLY

DATE

BY

REVISION

3. SEE BRIDGE CROSS SECTIONS ON BA8-11 FOR LANE SHOULDER WIDTHS.

REGIONAL ADM. T. BERENDS



NOT TO SCALE

Washington State Department of Transportation DATE

I-90 VANTAGE BRIDGE - REPLACE BRIDGE DECK, SPECIAL REPAIRS & DRAINAGE

QUANTITY TABULATION CONTINUED

TEMPORARY PAVEMENT MARKING PLAN

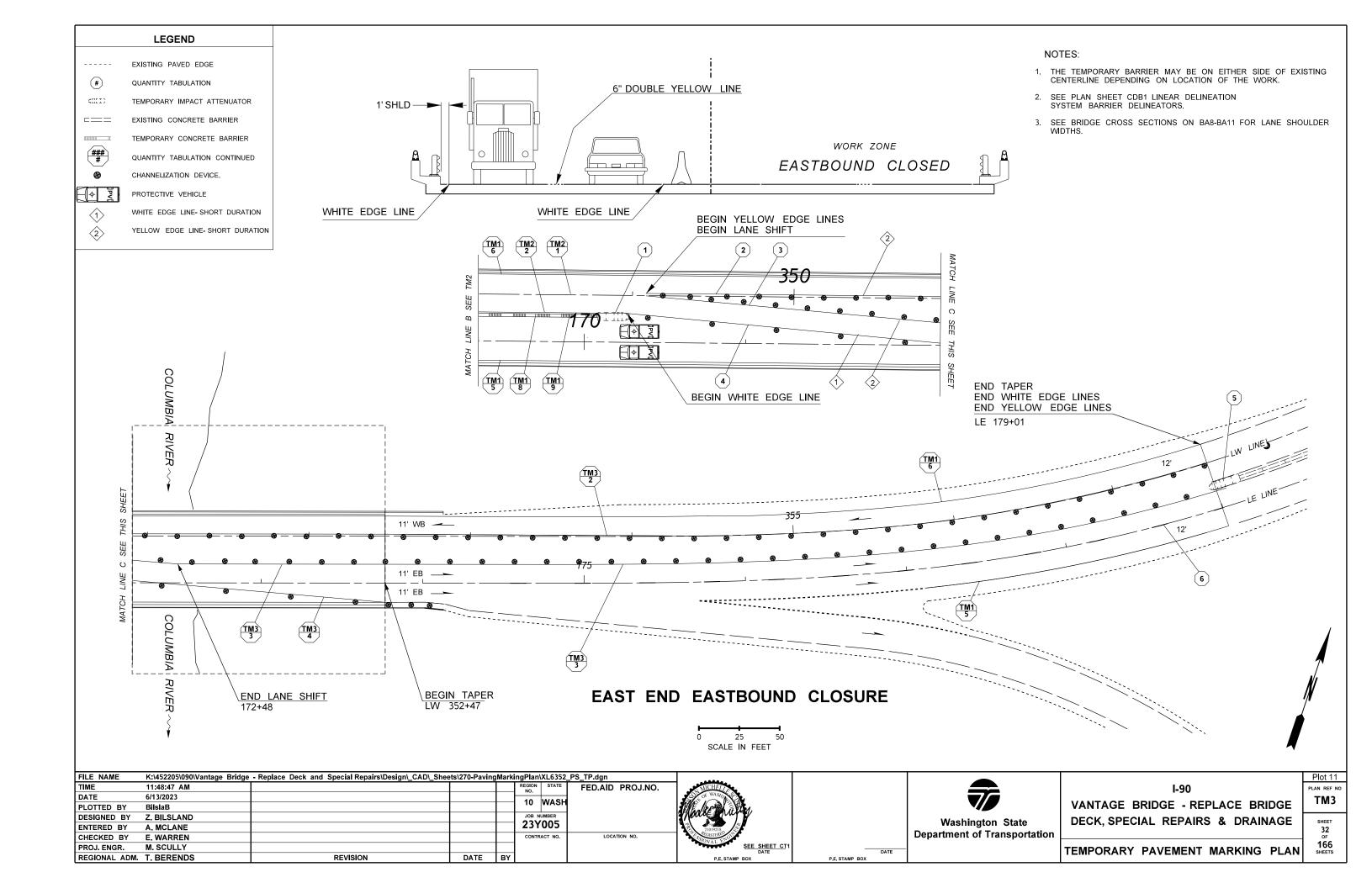
Plot 2

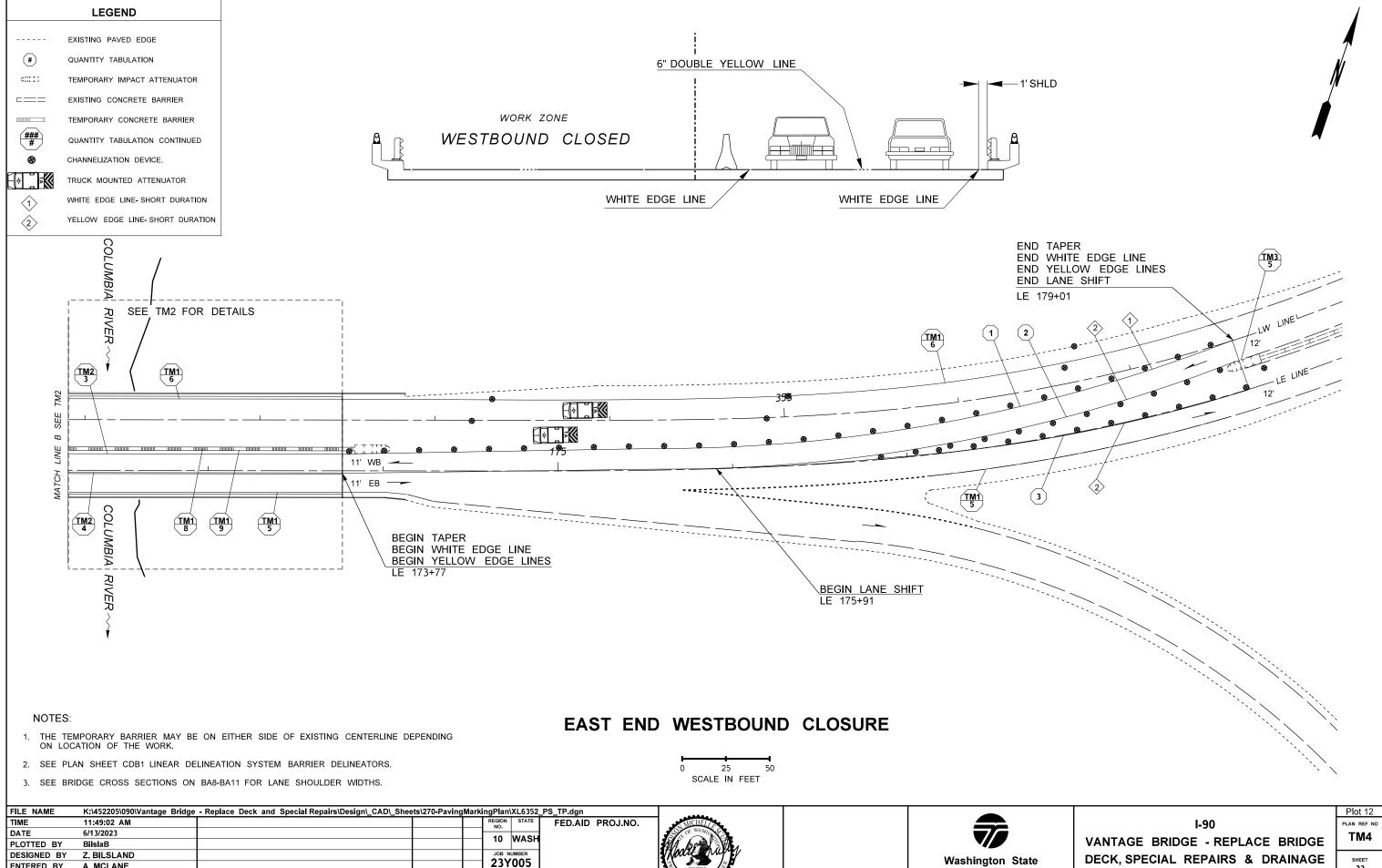
PLAN REF NO

TM2

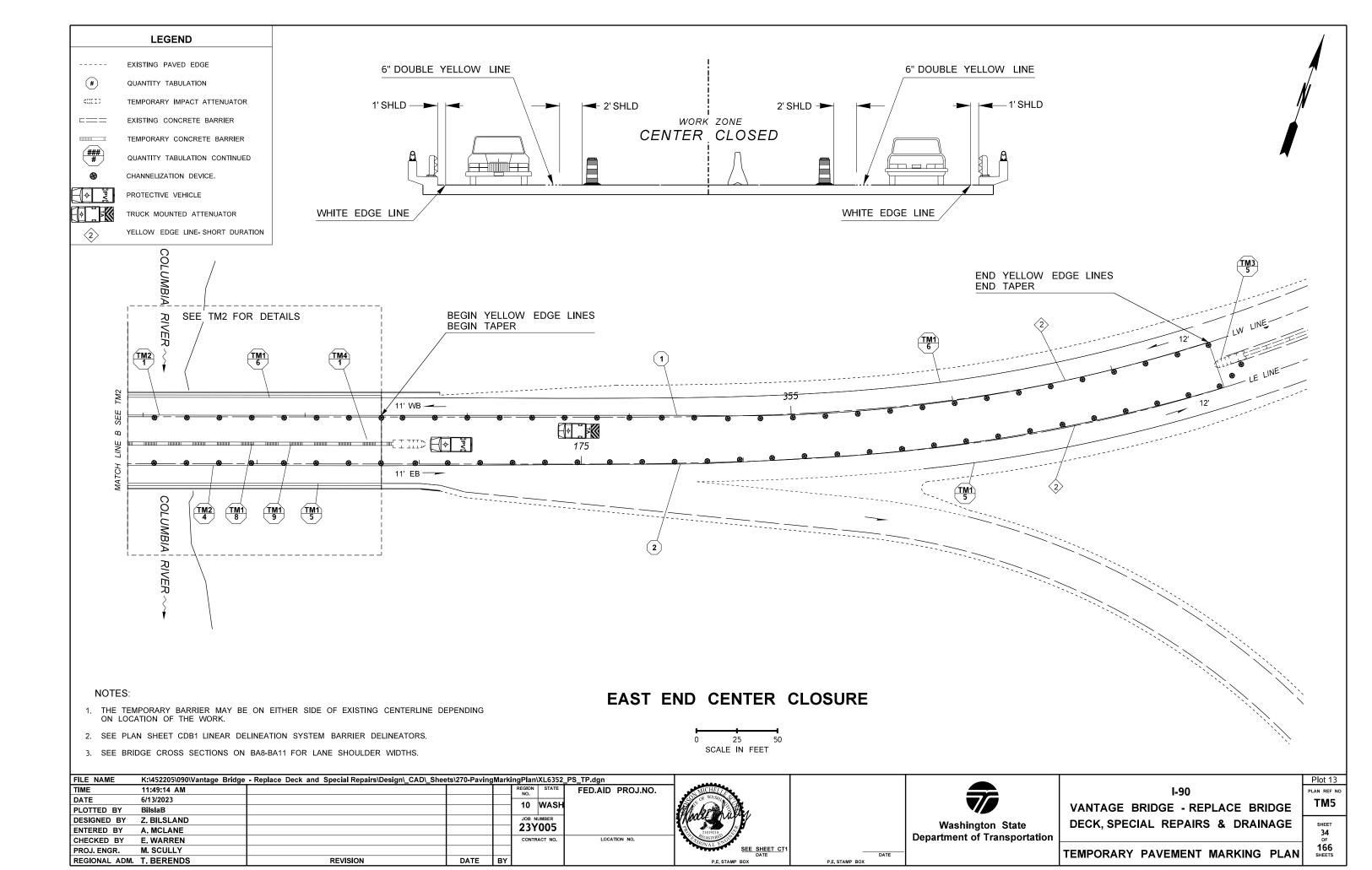
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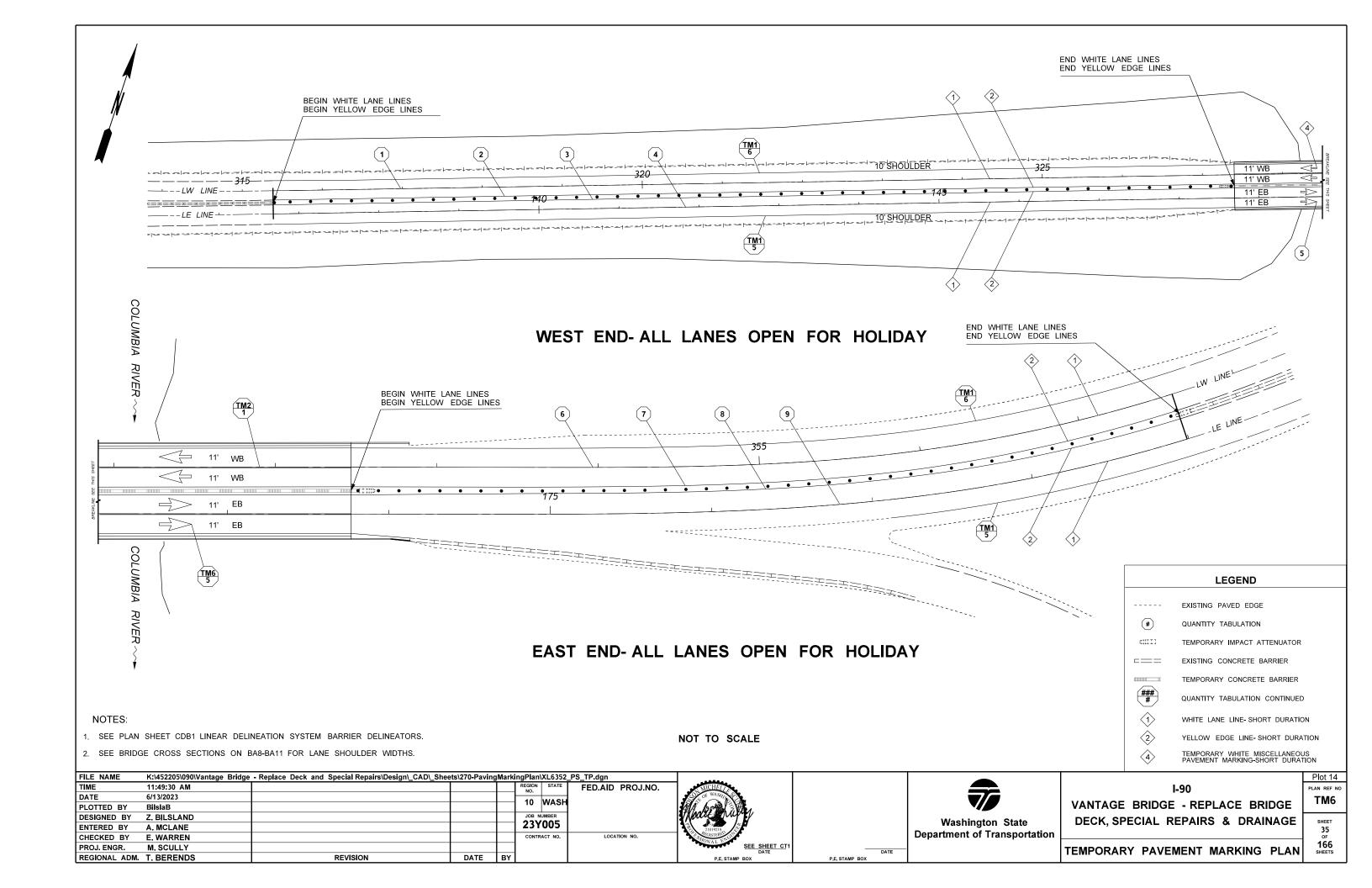
166 SHEETS

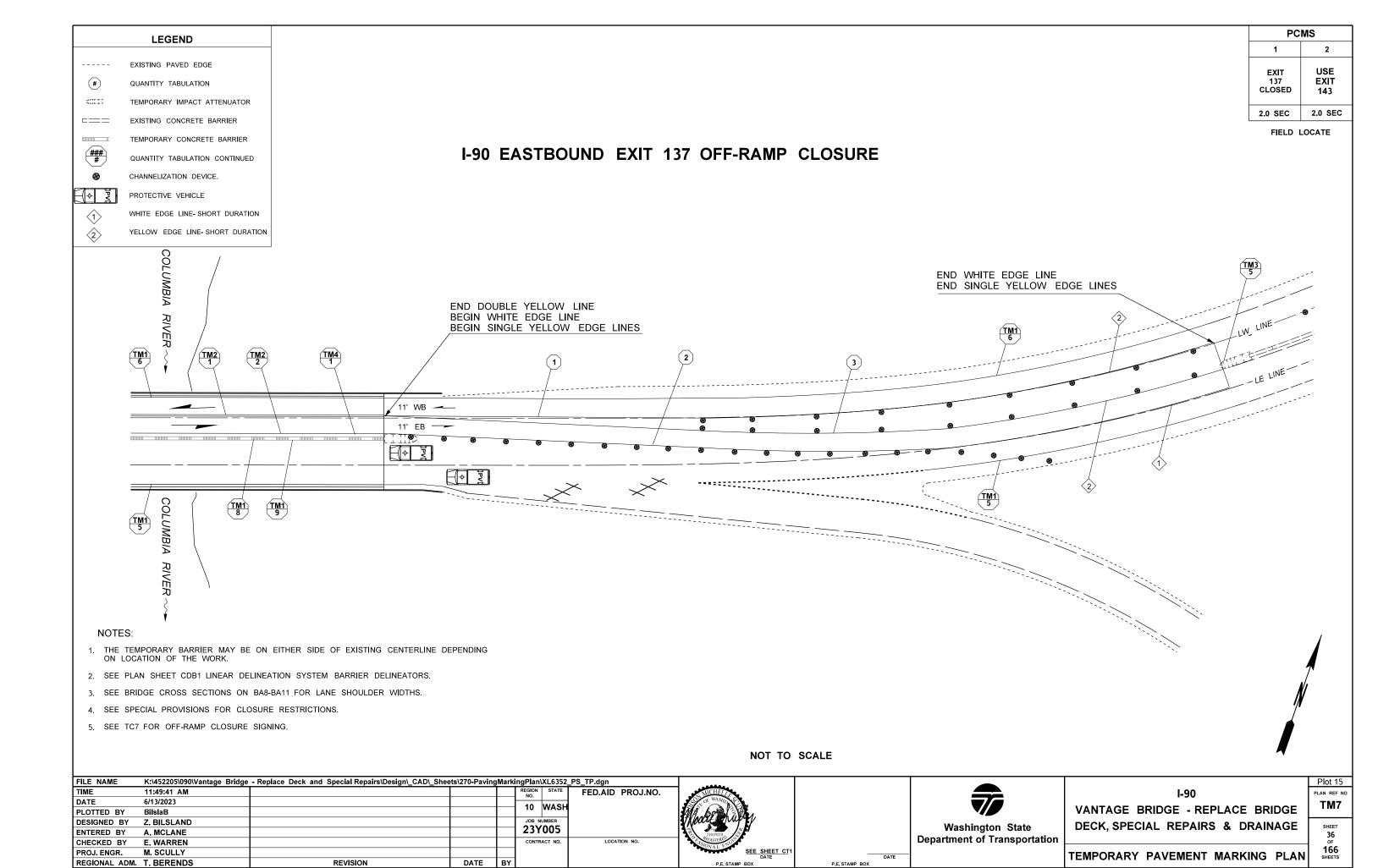




FILE NAME	K:\452205\090\Vantage Bridge	- Replace Deck and Special Repairs\Design_CAD_She	ets\270-Pavir	ngMarki	ngPlan\XL6352_	_PS_TP.dgn					Plot 12
TIME	11:49:02 AM				REGION STATE	FED.AID PROJ.NO.	MICHELLE			I-90	PLAN REF NO
DATE	6/13/2023				10 WASH		Se of Washing				TM4
PLOTTED BY	BilslaB				IU WASH		MA GENERAL			VANTAGE BRIDGE - REPLACE BRIDGE	1
DESIGNED BY	Z. BILSLAND				JOB NUMBER		Moderation		Washington State	DECK, SPECIAL REPAIRS & DRAINAGE	SHEET
ENTERED BY	A. MCLANE				23Y005		21019218			·	33
CHECKED BY	E. WARREN				CONTRACT NO.	LOCATION NO.	SO ON A LES		Department of Transportation		OF
PROJ. ENGR.	M. SCULLY						SEE SHEET CT1	DATE		TEMPORARY PAVEMENT MARKING PLAN	1 166
REGIONAL ADM.	. T. BERENDS	REVISION	DATE	BY			P.E. STAMP BOX	P.E. STAMP BOX		TEINI ONANT TAVENENT MANNING TEAN	1 SHEETS

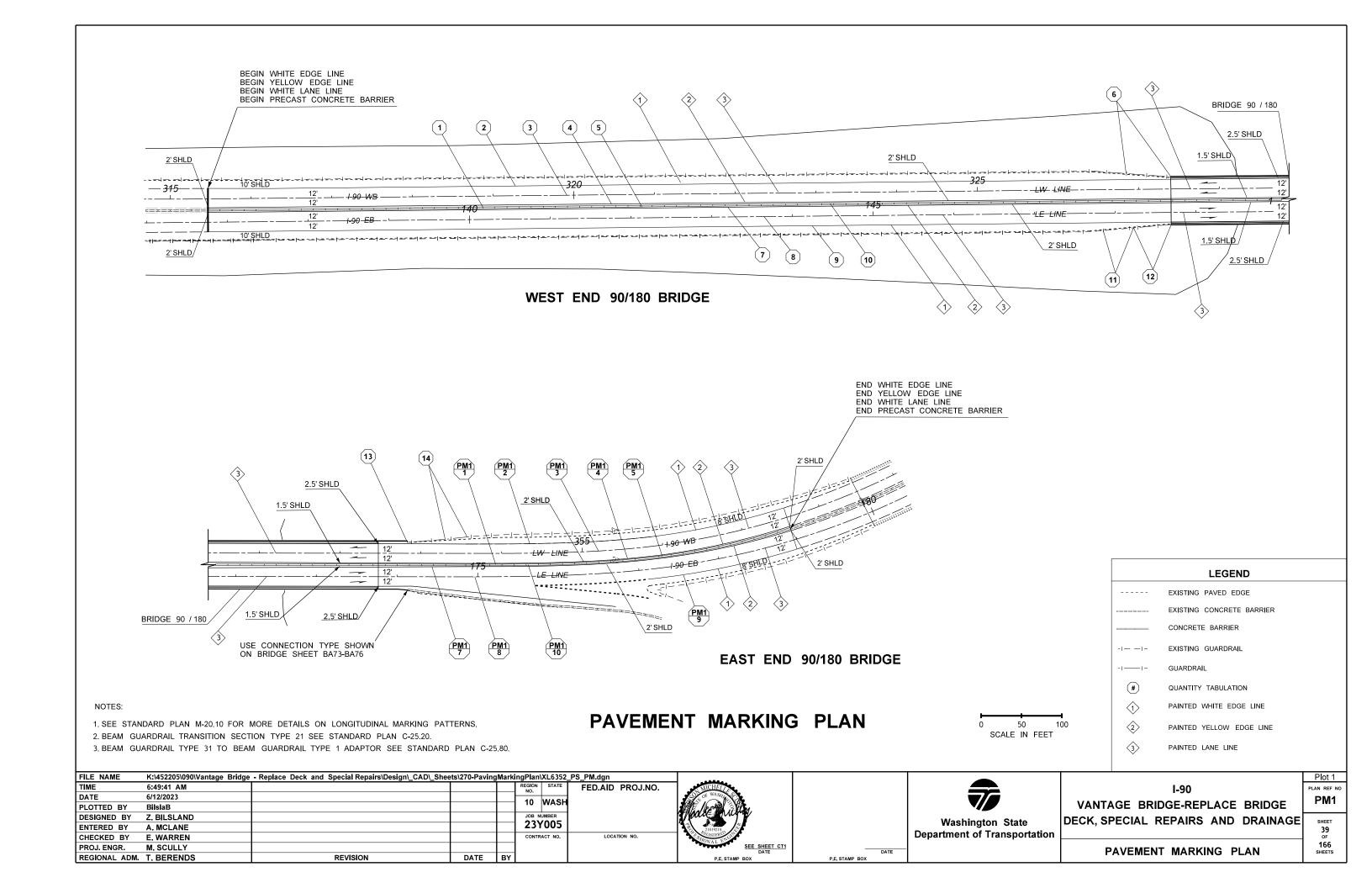


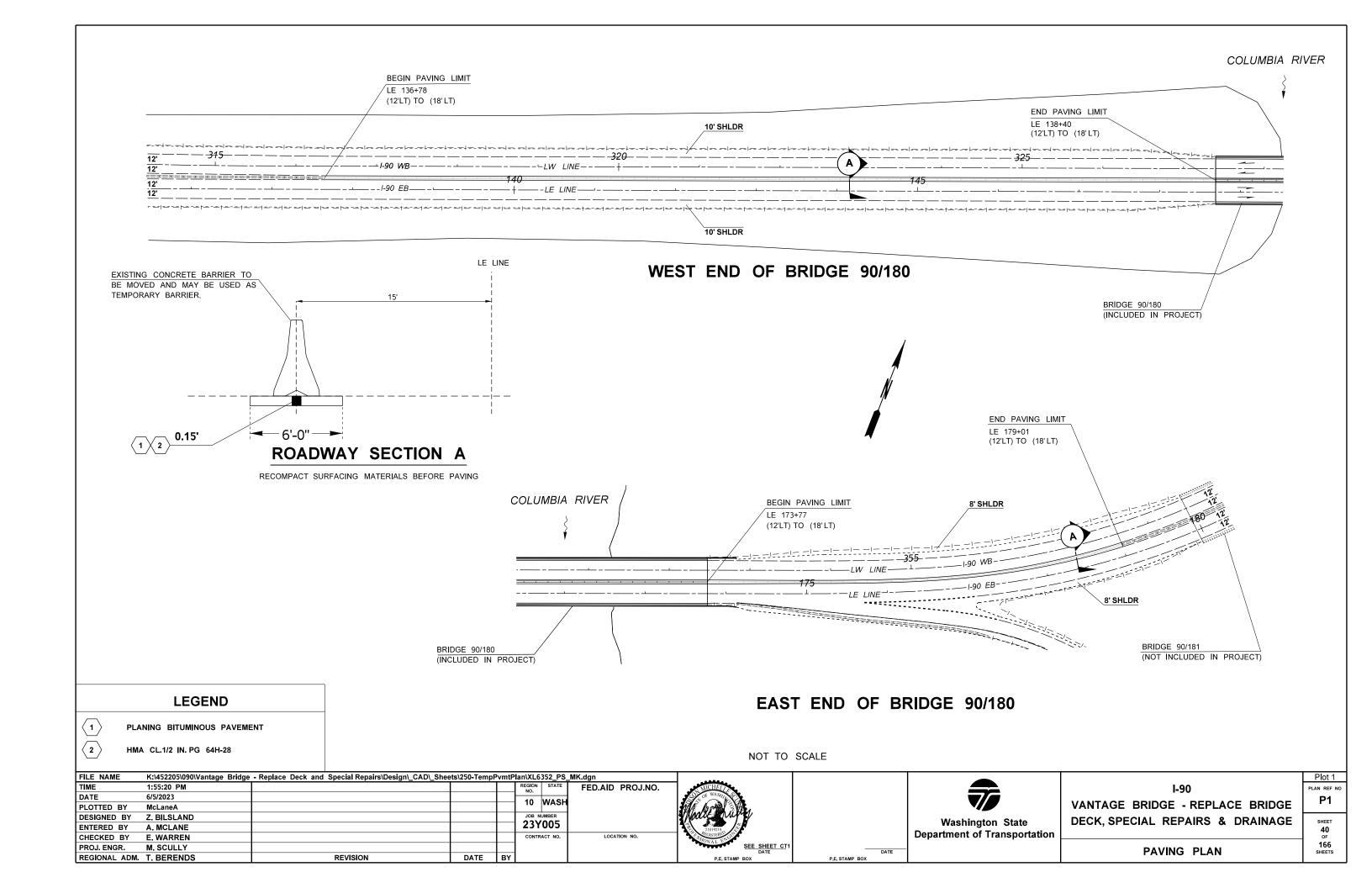


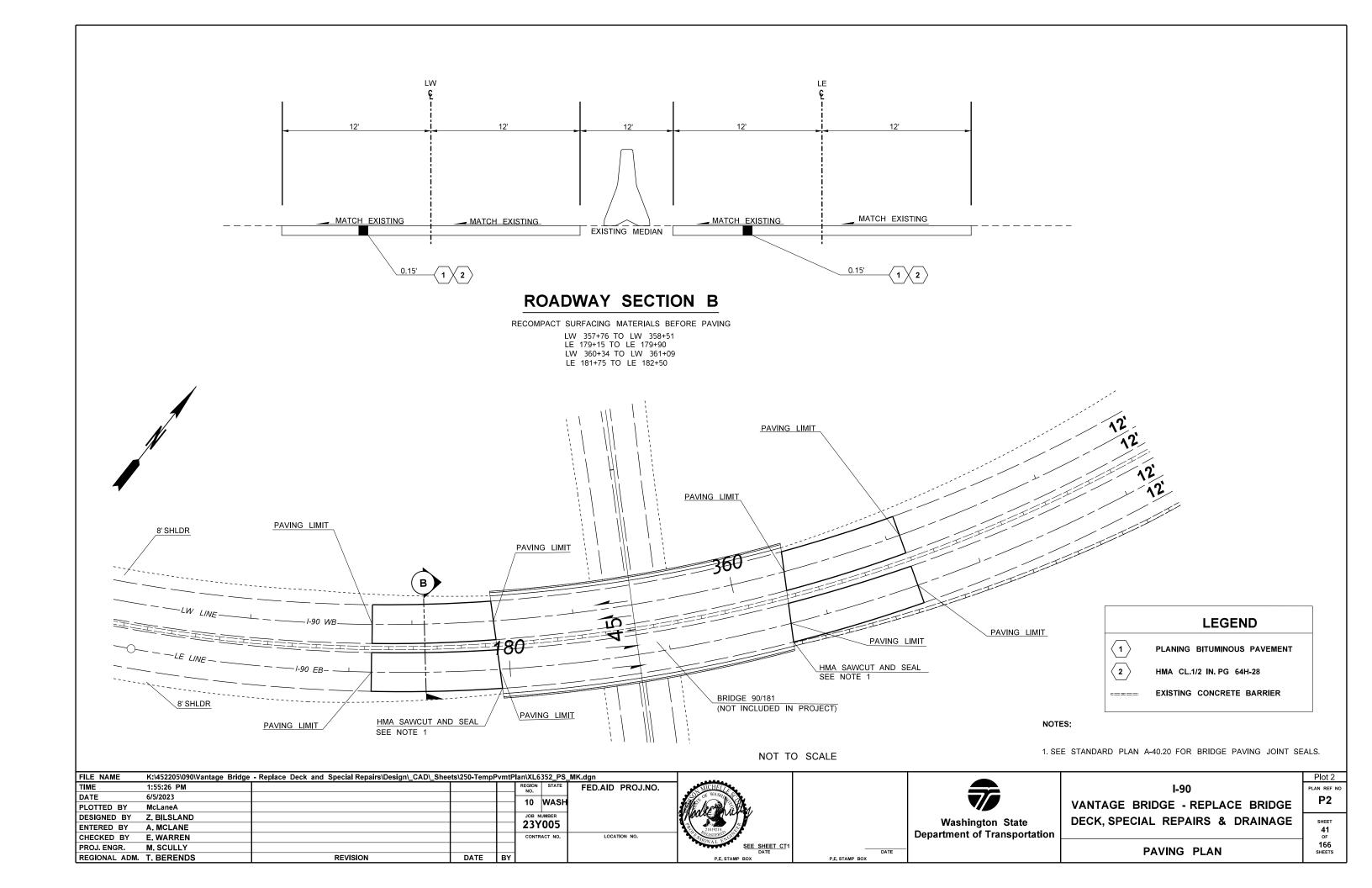


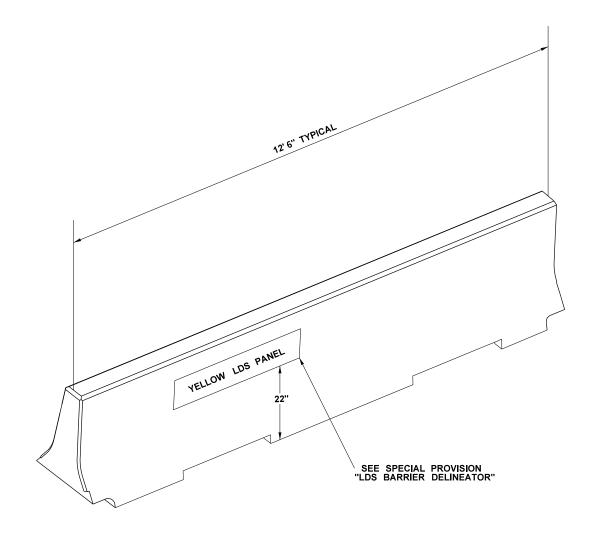
WINTER SHUTDOWN BEGIN WHITE EDGE LINE BEGIN YELLOW EDGE LINE BEGIN WHITE LANE LINE BEGIN TEMP BARRIER $\langle 1 \rangle \langle 2 \rangle \langle 3 \rangle$ (2) (3) **(4)** 1.5' SHLD 2' SHLD 1.5' SHLD 2' SHLD — 315— 1.5' SHLD 2' SHLD/ <u>2' SHLD</u>/ (5) (6) 1.5' SHLD (8) WEST END 90/180 BRIDGE END WHITE EDGE LINE END YELLOW EDGE LINE END WHITE LANE LINE END TEMP BARRIER 2' SHLD 1.5' SHLD $\frac{\text{WS1}}{2}$ $\frac{\text{WS1}}{3}$ $\frac{\text{WS1}}{4}$ 2' SHLD 1.5' SHLD **LEGEND** 12' 12' 2' SHLD EXISTING PAVED EDGE -1-90 EB 12' 12' EXISTING CONCRETE BARRIER ==1+====+ TEMPORARY CONCRETE BARRIER WITH LDS BARRIER DELINEATOR BRIDGE 90 / 180 1.5' SHLD/ 2' SHLD 1.5' SHLD EXISTING GUARDRAIL WS1 5 WS1 7 WS1 8 QUANTITY TABULATION QUANTITY TABULATION CONTINUED EAST END 90/180 BRIDGE WHITE EDGE LINE - SHORT DURATION 50 100 2> YELLOW EDGE LINE - SHORT DURATION NOTE: SCALE IN FEET WHITE LANE LINE - SHORT DURATION 1. SEE SHEET QTTM2 "QUANTITY TABULATION- TEMPORARY MARKING PLAN" FOR QUANTITIES. FILE NAME K:\452205\090\Vantage Bridge - Replace Deck and Special Repairs\Design_CAD_Sheets\270-PavingMarkingPlan\XL6352_PS_TP.dgn Plot 2 TIME 11:49:49 AM FED.AID PROJ.NO. I-90 PLAN REF NO DATE 6/13/2023 TM8 10 WASH VANTAGE BRIDGE-REPLACE BRIDGE PLOTTED BY BilslaB DESIGNED BY Z. BILSLAND DECK, SPECIAL REPAIRS AND DRAINAGE Washington State 23Y005 ENTERED BY A. MCLANE **Department of Transportation** CHECKED BY E. WARREN CONTRACT NO. LOCATION NO. 166 SHEETS PROJ. ENGR. M. SCULLY DATE TEMPORARY PAVEMENT MARKING PLAN REGIONAL ADM. T. BERENDS DATE BY REVISION

				Q	UAN	TITY	TAB	ULAT	ION - P	AVIN	G/MA	RKIN	IG PL	_AN			
				Z													GENERAL NOTES:
REFERS REFEREI CONSTR	ST NUMBER OF THE "CODE" BELOW TO THE SHEET NO. OR THE SHEET NCE NO. SHOWING THE UCTION FEATURE. COND NUMBER REFERS TO THE UCTION FEATURE FOUND ON THAT		BEAM GUARDRAIL TYPE 31 - 8FT LONG POST	BEAM GUARDRAIL TRANSITION TYPE 21		PRECAST CONC. BARRIER TYPE F ANCHORED	LEXIBLE GUIDE POST	AINT LINE***	DS BARRIER DELINEATOR***	ARRIER GLARE SCREEN						SEE GENERAL NOTES	
CODE	LOCATION → \ UNIT OF MEASURE >		L.F.	EACH		L.F.	EACH	L.F.	EACI	d L.F.						0)	
PM1-1 LE	136+78 TO LW 206+98 133+00 (22'LT) TO LE 174+89 (15'LT) / 315+47 (12' LT) TO LW 357+62 (12' LT)						50	4220		4230						1,2,3,12	1. SEE STANDARD PLAN M-40.10. 2. SEE STANDARD PLAN M-40.20. 3. SEE SPECIAL PROVISION "FLEXIBLE GUIDEPOST"
PM1-3 LW	/ 315+47 TO LW 357+62							4220								13	4. SEE SPECIAL PROVISION "GLARE SCREEN"
PM1-5 LE PM1-6 LW	/ 315+47 (12' RT) TO LW 357+62 (12' RT) 136+78 (15' LT) TO LE179+01 (15' LT) / 326+93 (16; LT) TO LW 327+40 (14' LT)			1		4225		4220								13 4 9,10	5. SEE PLAN SHEET "CBD1" FOR MORE ON LINEAR DELINEATION SYSTEM BARRIER DELINEATOR.
PM1-7 LE	136+78 (12' LT) TO LE179+01 (12' LT)							4220								13	6. SEE SPECIAL PROVISION, "LDS BARRIER DELINEATORS".
PM1-9 LE	136+78 TO LE179+01 136+78 (12' RT) TO LE179+01 (12' RT)							4220 4220								13 13	7. YELLOW LDS BARRIER DELINEATOR PANEL.
	136+78 (14' LT) TO LE179+01 (14' LT) 147+98 (20'RT) TO LE 148+23 (19' RT)		25						676							5,6,7,14 13 9,10,11	8. SHEET BA92 FOR BRIDGE BARRIER TYPE F TRANSITION AND CONNECTION TYPE.
PM1-12 LE	148+23 (19' RT) TO LE 148+70 (14' RT)			1												9,10	9. SEE STANDARD PLAN C-25.20.
	/ 352+83 (14'LT)TO LW+353+30(16' LT) / 353+30 (16'LT) TO LW 353+55 (18 'LT)		25	1												9,10 9,10,11	10. FOR GUARDRAIL CONNECTION TO BRIDGE RAILING TYPE 3- TUBE. SEE SHEET BA73-BA76.
																	11. BEAM GUARDRAIL TYPE 31 TO BEAM GUARDRAIL TYPE 1 ADAPTOR SEE STANDARD PLAN C-25.80
																	12. FLEXIBLE GUIDE POSTS TO BE REPLACED WHEN DAMAGED.
																	13. SEE SNDR2 FOR ADDITIONAL QUANTITIES.
																	14. SEE QTTM2 FOR ADDITIONAL QUANTITIES.
																	*** PROJECT TOTAL FOR "PAINT LINE" AND "LDS BARRIER DELINEATOR" ARE THE SUMMATION OF THE PROJECT TOTALS ON THIS SHEET AND SHEETS SNDR2 AND QTTM2.
																	-
												1					
	SHEET TOTAL		50	3		4225	50	25320	676	4230							1
	PROJECT TOTAL		50	3		4225 REGION NO.	50 STATE	25320 FED. AID P	676 ROJ. NO .	4230		+					<u> </u>
DESIGNED BY Z.BILSLAND ENTERED BY A.MCLANE				10	WASH						Washington State				I-90 QTPN ITAGE BRIDGE - REPLACE BRIDGE EK, SPECIAL REPAIRS & DRAINAGE SHEE		
HECKED ROJ. ENG	BY E.WARREN GR. M. SCULLY					JOB NUMBER 23Y005 CONTRACT NO.							Washington State Department of Transportation				38 OF
EGION A	DM. T. BERENDS DATE DATE		REVISION		BY	CONTRA	AUT NU.									QUANTI	TY TABULATION - PAVING/MARKING PLAN 166 SHEET





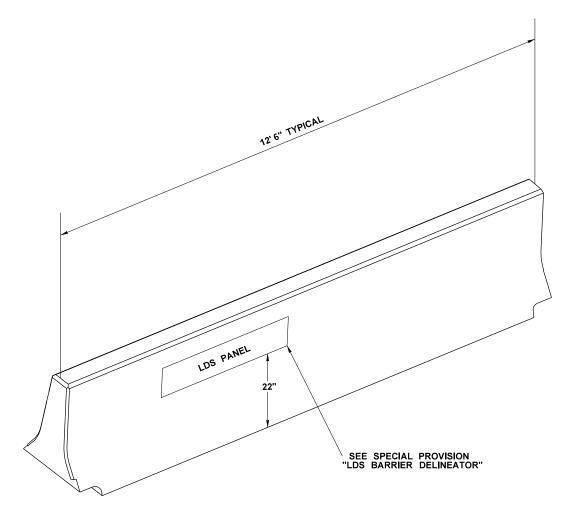




TYPE F CONCRETE BARRIER

NOTE:

1.INSTALL ONE "LINEAR DELINEATION SYSTEM" ON EACH SIDE OF BARRIER EVERY 12.5'.



TEMPORARY CONCRETE BARRIER

NOTE:

1.INSTALL ONE "LINEAR DELINEATION SYSTEM" ON EACH SIDE OF BARRIER EVERY 12.5'. USE WHITE IN TEMPORARY CONFIGURATION INCLUDING HOLIDAY CLOSURES CHANGE TO YELLOW OVER WINTER SHUTDOWN.

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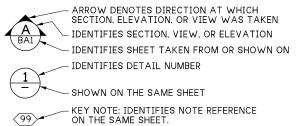
I-90
VANTAGE BRIDGE- REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

CONCRETE BARRIER DETAIL

SHEET
42
0F
166
SHEETS

LEGEND:

AND DOWNSPOUT (TYP.)



ELEVATION

-EXISTING CROSSBEAM REPAIR

-EXISTING CONDUIT (TO BE REMOVED)

-EXISTING CONDUIT (TO BE REMOVED BY OTHERS)

- EXISTING UPSTREAM GROUND LINE

EXISTING GROUND LINE, WATER SURFACE AND SHORELINES ARE APPROXIMATE, THEY ARE TAKEN FROM THE 2017 UNDERWATER BRIDGE CONDITION INSPECTION SURVEY.

EXISTING CROSSBEAM REPAIR

P = PINNED BEARING

PLOT DATE: 6/12/2023 PLOT TIME: 2:46:48 PM

E = EXPANSION BEARING OR PIN & HANGER ASSEMBLY

PLOTTED BY: McCarD

BRIDGE DECK REPLACEMENT

- EXISTING COLUMN REPAIR

ᇤ	FILE NAME	001 LAYOUT.dgn					REGION STATE					PLAN REF NO
뿛	BRIDGE DES. ENG.	Leland, AC					7			NY C. LELAN	I-90	
ä	BRIDGE PROJ. ENG.	Rosa, M					10 WASH	WSDOT		To WASHINGS	VANTAGE BRIDGE - REPLACE BRIDGE	BA1
ĕ	SUPERVISOR	Aldrich, BS					JOB NUMBER	WSDOT			DECK, SPECIAL REPAIRS & DRAINAGE	
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ا	PRELIM. PLAN BY								SEE SHEET CT1	SEE SHEET CT1	LAYOUT	166
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2. THE CONCRETE IN DECK PANELS SHALL BE CLASS 5000D. THE CONCRETE IN EXPANSION JOINT HEADERS SHALL BE EXPANSION JOINT HEADER CONCRETE. CONCRETE IN BRIDGE APPROACH SLABS SHALL BE CLASS 4000A. ALL OTHER CAST-IN-PLACE CONCRETE SHALL BE CLASS 4000.

3. UNLESS OTHERWISE SHOWN IN THE PLANS. CONCRETE COVER MEASURED FROM THE FACE OF CONCRETE TO THE FACE OF ANY REINFORCING STEEL SHALL BE 3" AT THE TOP OF THE CONCRETE DECK PANELS, 11/4" AT THE BOTTOM OF DECK PANELS, AND 2" AT ALL OTHER LOCATIONS.

4. FALSEWORK AND TEMPORARY SUPPORTS SHALL BE CAREFULLY RELEASED TO PREVENT IMPACT OR UNDUE STRESS IN THE STRUCTURE.

5. CONDUITS, JUNCTION BOXES, AND UTILITIES ARE SHOWN FOR REFERENCE ONLY. THE CONTRACTOR SHALL COORDINATE THESE PLANS WITH THE ELECTRICAL, I.T.S. AND OTHER CIVIL PLANS.

6. EXISTING FEATURES AND DIMENSIONS ARE BASED ON INSPECTION REPORTS AND AS-BUILT PLANS. THE CONTRACTOR SHALL VERIFY PERTINENT DIMENSIONS AND FEATURES USING FIELD MEASUREMENT AND EXISTING SHOP DRAWINGS PRIOR TO ORDERING MATERIALS AND PROCEEDING WITH CONSTRUCTION.

7. ALL TEMPORARY ATTACHMENTS AND MODIFICATIONS TO THE EXISTING STRUCTURE NOT SHOWN IN THE PLANS SHALL BE APPROVED BY THE ENGINEER PRIOR TO THE WORK PROCEEDING.

8. ALL GROUT SHALL BE TYPE 5 FOR STRUCTURAL PRECAST CONNECTIONS, UNLESS NOTES OTHERWISE.

9. ALL DIMENSIONS SHOWN ARE FOR CONSTRUCTION PRIOR TO THE GRINDING OF THE BRIDGE DECK UNLESS NOTED OTHERWISE

STRUCTURAL STEEL NOTES:

1. ALL STRUCTURAL STEEL SHALL BE STRUCTURAL LOW ALLOY STEEL AND CONFORM TO AASHTO M 270 GRADE 50, 50W, OR GRADE 50S UNLESS NOTED OTHERWISE. L SHAPES (ANGLES) AND MEMBERS MARKED © MAY BE FABRICATED FROM ASTM A36 STEEL.

2. ASTM A 1011 GRADE 50 MAY BE USED FOR FILLER PLATES LESS THAN 1/4 INCH THICKNESS.

3. ALL FIELD AND SHOP CONNECTIONS SHALL BE MADE WITH HIGH STRENGTH BOLTS, WITH THE BOLT HEADS TOWARD THE OUTSIDE AND UNDERSIDE OF THE BRIDGE UNLESS SHOWN OTHERWISE. HIGH STRENGTH BOLTS SHALL BE ASTM F3125 GRADE A325 TYPE 1, 7%" INCH DIAMETER, EXCEPT AS NOTED OTHERWISE, PERMANENT BOLTS SHALL BE GALVANIZED. TENSION CONTROL BOLTS SHALL NOT BE USED UNLESS APPROVED BY THE ENGINEER. NUTS AND WASHERS SHALL CONFORM TO STANDARD SPECIFICATIONS, SECTION 9-06.5(3), ALL HOLES SHALL BE 15/16/1/9 UNLESS NOTED OTHERWISE. THE MINIMUM CENTER-TO-CENTER DIMENSION SHALL BE 3 INCH UNLESS SHOWN OTHERWISE. THE MINIMUM EDGE DISTANCE SHALL BE $1\frac{3}{4}$ " UNLESS SHOWN OTHERWISE. BOLT SPACING AND EDGE DISTANCES MAY BE LESS IF MATCHING HOLES IN AN EXISTING CONNECTION. ALL CONNECTIONS SHOWN ARE FOR FIELD BOLTING. SHOP BOLTING MAY BE USED WHERE APPROVED IN THE SHOP PLANS.

4. WHERE EXISTING RIVETS OR BOLTS ARE REMOVED, THEY SHALL BE REPLACED WITH HIGH-STRENGTH BOLTS OF EQUAL DIAMETER UNLESS SHOWN OTHERWISE

5. ALL NEW BOLT HOLES IN EXISTING MEMBERS OR PLATES SHALL BE MATCH DRILLED IN THE FIELD USING SHOP DRILLED HOLES IN THE NEW STEEL MEMBER OR PLATE AS A TEMPLATE. HOLES IN NEW STEEL MEMBERS CORRESPONDING TO EXISTING RIVETS SHALL BE FIELD DRILLED TO MATCH EXISTING LOCATIONS.

6. THE CONTRACTOR SHOULD ANTICIPATE MISALIGNMENT OF HOLES IN EXISTING CONNECTIONS WHERE %"Ø RIVETS ARE BEING REMOVED AND REPLACED WITH %"Ø H.S. BOLTS. HOLES SHALL BE REAMED TO $^{15}\!\!/_{6}$ "Ø MINIMUM AND $1^{1}\!\!/_{6}$ "Ø MAXIMUM IF APPROVED BY THE ENGINEER AS NECESSARY TO FACILITATE INSTALLATION OF NEW H.S. BOLTS. THE ENGINEER SHALL BE NOTIFIED OF ANY LOCATIONS THAT EXCEED THE HOLE SIZE LIMITS AS SPECIFIED.

7. NO WELDING ON THE STRUCTURE SHALL BE PERFORMED UNLESS APPROVED BY THE ENGINEER. ALL WELDING SHALL BE DONE TO MINIMIZE DISTORTION. THE WELDING SEQUENCES AND PROCEDURES TO BE USED SHALL BE SUBMITTED AS A TYPE 2 WORKING DRAWING AND APPROVED PRIOR TO

8. ALL WELDED SHEAR CONNECTORS SHALL BE $\frac{7}{8}$ INCH DIAMETER UNLESS NOTED OTHERWISE.

9. GALVANIZING SHALL BE IN ACCORDANCE WITH AASHTO M 111, M 232, OR ASTM F2329 AS APPLICABLE.

10. ALL DIMENSIONS ARE HORIZONTAL AND VERTICAL UNLESS OTHERWISE SHOWN.

11. BOLT HOLES REMAINING IN GIRDER, STRINGER OR FLOOR BEAM WEBS (EXCLUDING STIFFENERS) UPON REMOVAL OF DECK FORM WORK AND TEMPORARY MEMBERS SHALL BE FILLED WITH FULLY TENSIONED ASTM F3125 GRADE A325 BOLTS IN ACCORDANCE WITH SECTION 6-03.3(33). EACH BOLT HEAD SHALL BE PLACED ON THE EXTERIOR SIDE OF WEB.

12. THE CONTRACTOR SHALL PROVIDE, AS REQUIRED, TEMPORARY BRACING AND/OR WEB STIFFENING AT LOCATIONS WHERE DECK FORMS ARE ATTACHED TO UNBRACED OR UNSTIFFENED WEBS.

RIVET INSPECTION AND REPLACEMENT NOTES:

1. EXISTING RIVETS TO REMAIN ON MEMBERS AND/OR GUSSETS BEING MODIFIED OR CONNECTED TO TEMPORARY SUPPORTS SHALL BE EVALUATED AFTER FIELD PREPARATION IS COMPLETED AND SHALL BE REMOVED AND REPLACED IN ACCORDANCE WITH THE RIVET EVALUATION CRITERIA SHOWN IN NOTE 5. NEW H.S. BOLTS SHALL BE INSTALLED AND TENSIONED IN ACCORDANCE WITH SECTION 6-03.3(33), AND PREPARED FOR PAINT IN ACCORDANCE WITH SECTION 6-07.3(11)A.

2. BOLTS REPLACING RIVETS SHALL HAVE A DIAMETER MATCHING THE DIAMETER OF THE RIVET THEY REPLACE.

3. UNLESS OTHERWISE SHOWN IN THE PLANS OR APPROVED BY THE ENGINEER, ONLY ONE RIVET MAY BE REMOVED AND REPLACED AT A TIME AT ANY CONNECTION. THE REPLACEMENT BOLT SHALL BE FULLY INSTALLED AND TENSIONED BEFORE THE NEXT RIVET MAY BE REMOVED

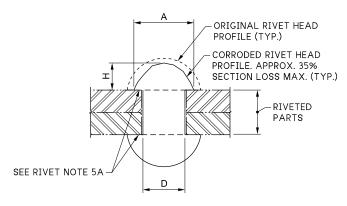
4. PRIOR TO STARTING ANY RIVET REMOVAL, THE CONTRACTOR SHALL SUBMIT A TYPE 2 WORKING DRAWING DETAILING PROPOSED RIVET REMOVAL METHODS TO THE ENGINEER. ACCEPTANCE WILL REQUIRE DEMONSTRATION BY THE CONTRACTOR TO ENSURE NO DAMAGE WILL OCCUR TO THE EXISTING MEMBER TO REMAIN. NO FLAME CUTTING METHODS WILL BE PERMITTED.

5. RIVETS SHALL BE REPLACED IF THEY MEET ANY ONE OF THESE CRITERIA:

A. REPLACE RIVET IF THERE IS SEPARATION BETWEEN THE SOUND METAL SURFACES OF EITHER RIVET HEAD AND THE RIVETED PARTS.

B. REPLACE RIVET IF THE RIVET VISUALLY APPEARS TO BE LOOSE FOR ANY REASON. RIVETS VISUALLY SUSPECT OF BEING LOOSE SHALL BE CONFIRMED LOOSE IF IT CAN BE FELT TO MOVE AFTER BEING STRUCK ON THE SIDE OF THE HEAD IN A DIRECTION APPROXIMATELY PERPENDICULAR TO ITS SHANK WITH A 40 OZ

C. REPLACE RIVET IF SECTION LOSS IS EQUAL TO OR GREATER THAN THE RIVET SECTION DIAGRAM SHOWN BELOW. FOR RIVETS WITH IRREGULAR SECTION LOSS, CONTACT THE ENGINEER FOR DIRECTION.



RIVET SECTION

MINIMUM	I RIVET DIN	MENSIONS
	MINIMUM HEAD DIAMETER "A"	MINIMUM HEAD HEIGHT "H"
7/8"	11/4"	%6"
3⁄4"	11/8"	7∕ ₁₆ "

DESIGN CRITERIA:

1. NEW ELEMENTS OF THIS STRUCTURE HAVE BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 9TH EDITION WITH INTERIMS. REPAIRS OF EXISTING ELEMENTS HAVE BEEN DESIGNED TO THE ORIGINAL BRIDGE DESIGN CRITERIA

2. THE DECK PANELS INCLUDE A 1" SACRIFICIAL WEARING THICKNESS. DEAD WEIGHT INCLUDES THE FULL SACRIFICIAL THICKNESS, STRENGTH NEGLECTS THE FULL SACRIFICIAL THICKNESS.

3. THE BRIDGE DECK HAS BEEN DESIGNED FOR A FUTURE WEARING SURFACE LOAD OF 15 PSF CORRESPONDING TO A 1.5" CONCRETE OVERLAY AFTER 0.5" OF SCARIFICATION.

4 THE TRAFFIC BARRIER IS DESIGNED FOR TI -4 DESIGN CRITERIA. THE TRAFFIC BARRIER TRANSITIONS AT THE BRIDGE ENDS ARE DESIGNED FOR TL-3 DESIGN CRITERIA.

5. EXISTING STEEL IS ASSUMED TO HAVE THE FOLLOWING STRENGTHS: - CARBON STEEL, Fy = 33 KSI - LOW-ALLOY STEEL (PLATES UP TO 34!) Fy = 50 KSI

- LOW-ALLOY STEEL (PLATES OVER 3/4"), Fy = 42 KSI

- RIVETS (ASTM A141), Fu = 70 KSI

- HIGH STRENGTH BOLTS (ASTM A325), Fu = 120 KSI

6. SEE AS-BUILT PLANS FOR THE STEEL TYPE OF EXISTING MEMBERS.

PAINTING NOTES:

1. ALL NEW PERMANENT STRUCTURAL STEEL SHALL BE PAINTED

2. EXISTING STEEL SURFACES THAT ARE NOT OTHERWISE SPECIFIED TO BE PAINTED AND ARE LEFT EXPOSED OR DAMAGED BY THE CONTRACTOR SHALL BE PREPARED AND PAINTED IN ACCORDANCE WITH SECTION 6-07.3(10)P. PAINT LIMITS ON EXISTING STEEL SURFACES SHALL EXTEND 2" MIN. FROM THE CENTER OF REPLACED RIVETS AND FROM EDGES OF MEMBERS THAT EITHER BECOME TEMPORARILY

3. THE TOP SURFACES OF EXISTING STRINGER AND FLOOR BEAM TOP FLANGES SHALL RECEIVE SURFACE PREPARATION IN ACCORDANCE WITH SECTION 6-07.3(10)D AND ONE COAT OF PRIMER IN ACCORDANCE WITH SECTION 6-07.3(10)H. EXISTING PAINTED STEEL SURFACES TO BE COVERED BY OR CONNECTED TO NEW PERMANENT STEEL SHALL BE SURFACE PREPARED IN ACCORDANCE WITH SSPC-SP2. ANY BARE STEEL SHALL RECEIVE A PRIMER COAT IN ACCORDANCE WITH SECTION 6-07.3(10)H PRIOR TO ATTACHING NEW STEEL. AFTER NEW STEEL AND BOLT INSTALLATION IS COMPLETE, ALL NEW STEEL AND ANY EXISTING STEEL SPECIFIED TO BE PAINTED SHALL RECEIVE AN INTERMEDIATE, INTERMEDIATE STRIPE, AND TOP COAT

4. ALL NEW GALVANIZED BOLTS FOR PERMANENT USE SHALL BE SURFACE PREPARED AND FIELD COATED IN ACCORDANCE WITH SECTION 6-07.3(11)A.

5. PROTECT SURFACES NOT RECEIVING PREPARATION AND NEW PAINT.

6. TEMPORARY STEEL, INCLUDING TEMPORARY BOLTS, MAY BE UNPAINTED. TEMPORARY STEEL FAYING SURFACES SHALL BE SURFACE PREPARED TO SSPC-SP2 PRIOR TO INSTALLING TEMPORARY STEEL. AFTER TEMPORARY STEEL IS REMOVED, ALL SURFACES SHALL BE PREPARED AND PAINTED IN ACCORDANCE WITH SECTION 6-07.3(10)P. PAINT LIMITS SHALL BE A MINIMUM OF 3" BEYOND FAYING SURFACE OR TO EDGE OF PLATE, WHICHEVER IS LESS.

FASTENER SYMBOLS

REQUIRED NUTS AND WASHERS NOT SHOWN

- H.S. BOLT (ORIENT HEAD AS SHOWN) → - H.S. BOLT (NEW OR MATCH EXIST. HOLE)

+ - H.S. BOLT (MATCH EXIST. HOLE)

- H.S. COUNTERSUNK BOLT (NEW OR MATCH EXIST, HOLE) - H.S. COUNTERSUNK BOLT (MATCH EXIST. HOLE)

(- H.S. COUNTERSUNK BOLT (MACHINE EXIST. COUNTERSUNK) + - EXIST, RIVET OR BOLT

 \oplus + - EXIST. COUNTERSUNK RIVET OR BOLT - HOLE (UNFILLED) 0

- EXIST. HOLE (UNFILLED) للهلا

FILE NAME 002 GENERAL NOTES 1.dqn BRIDGE DES. ENG. Leland, AC 10 WASH BRIDGE PROJ. ENG. JOB NUMBER SUPERVISOR Aldrich BS DESIGNED BY 02/23 23Y005 CHECKED BY O'Neill. P 05/23 FNTFRFD BY McCarthy, DJ 02/23 PRELIM. PLAN BY ARCH. / SPEC. REVISION DATE BY







I-90 VANTAGE BRIDGE - REPLACE BRIDGE DECK, SPECIAL REPAIRS & DRAINAGE

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

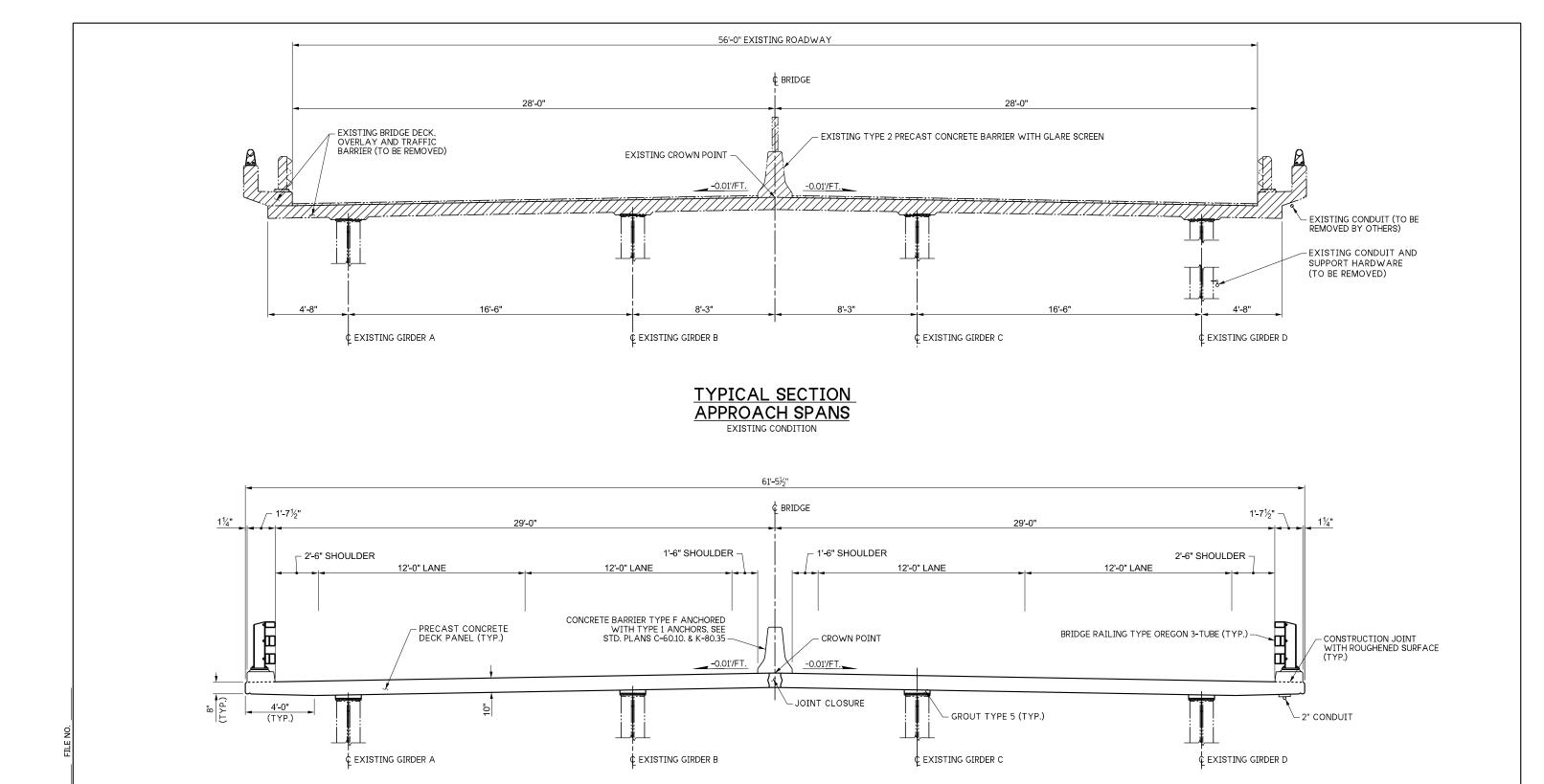
NOTES AND CRITERIA

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TYPICAL SECTION
APPROACH SPANS
MODIFIED CONDITION

LEGEND:

HATCHING DENOTES REMOVAL AREA

PLAN REF NO

BA3

SHEET

OF

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뿛	BRIDGE DES. ENG.	Leland, AC					NO.) . (A OL I	1 .
ij	BRIDGE PROJ. ENG.						10	WASH	
Ă	SUPERVISOR DESIGNED BY	Aldrich, BS					JOB	NUMBER	'
8	DESIGNED BY	Mizumori, A	02/23				23	Y005	
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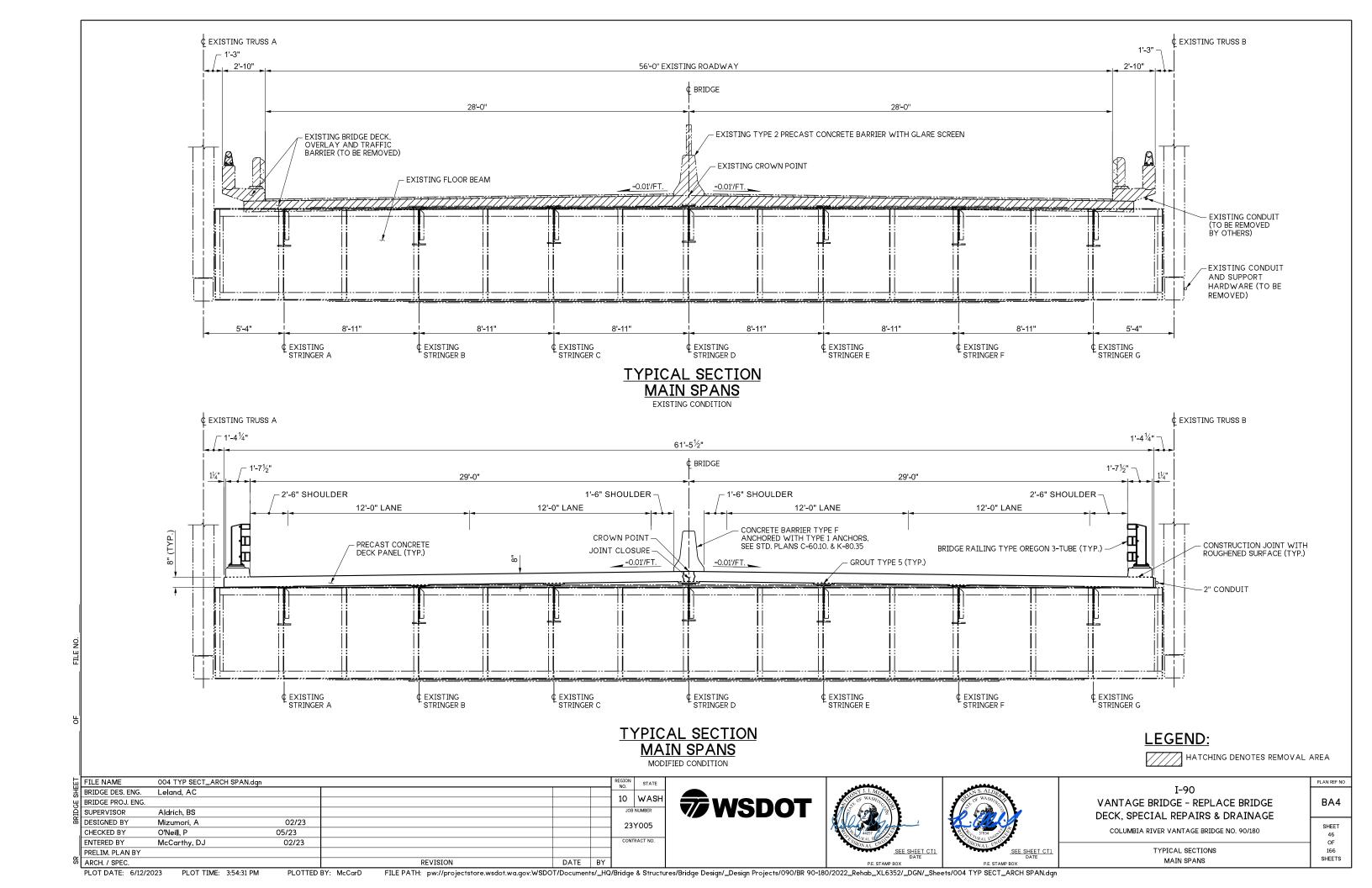


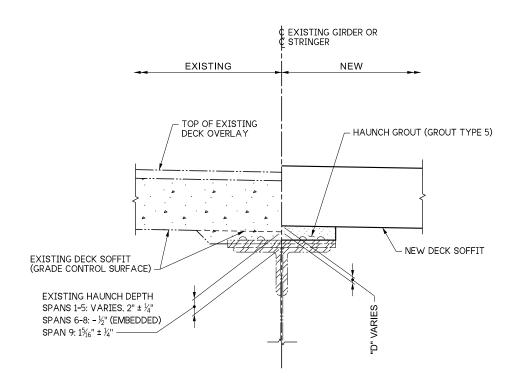
I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE
COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

TYPICAL SECTIONS

APPROACH SPANS

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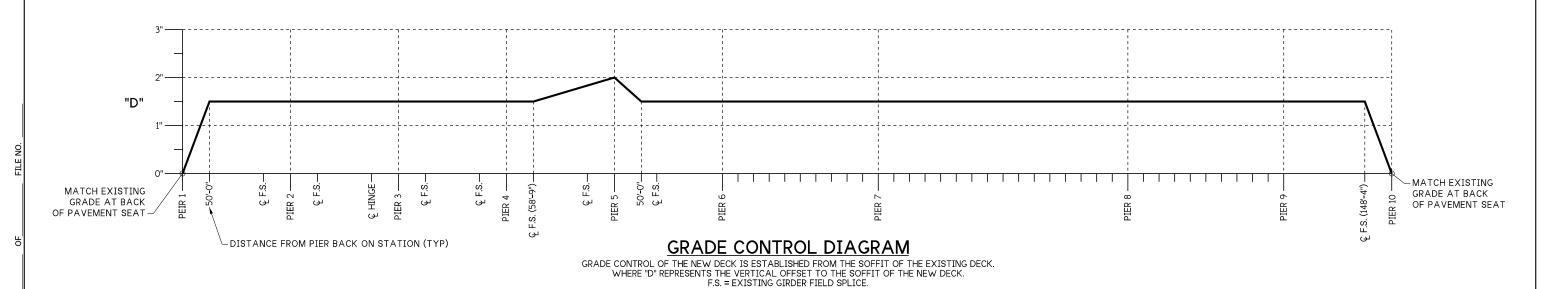
TOP OF BRIDGE DECK PANEL FINAL DECK SURFACE AFTER GRINDING SPECIFIED PRECAST DECK PANEL THICKNESS BRIDGE DECK SOFFIT

PROFILE GRINDING DETAIL

GRIND TO FINAL GRADE AFTER ALL BRIDGE DECK PANELS AND CLOSURES ARE IN PLACE. SEE SPECIAL PROVISIONS.

HAUNCH DETAIL - GRADE CONTROL

HAUNCH DEPTHS ARE BASED ON ORIGINAL PLANS AND PROVIDED FOR REFERENCE ONLY. HAUNCH DEPTHS ARE MEASURED TO THE TOP OF BEAM FLANGES (OR ANGES) EXCLUDING FLANGE COVER PLATES. HAUNCH DEPTHS DO NOT INCLUDE CHORD EFFECTS OF BEAM CAMBER. ACTUAL HAUNCH DEPTHS SHALL BE FIELD VERIFIED AS NEEDED. STEEL PLATE GIRDER SHOWN, STEEL STRINGER SIMILAR.



FILE NAME 005 GRADE CONTROL DETAILS.dqn STATE BRIDGE DES. ENG. Leland, AC 10 WASH BRIDGE PROJ. ENG. JOB NUMBER SUPERVISOR Aldrich BS DESIGNED BY 02/23 23Y005 CHECKED BY O'Neill, P 05/23 ENTERED BY McCarthy, DJ 02/23 PRELIM. PLAN BY ARCH. / SPEC. REVISION DATE BY







I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

PLAN REF NO

BA5

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OF

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PROFILE GRADE CONTROL

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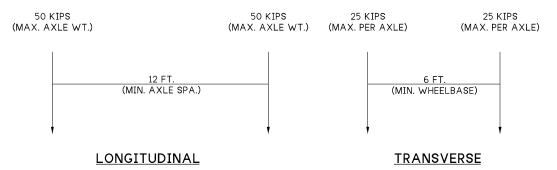
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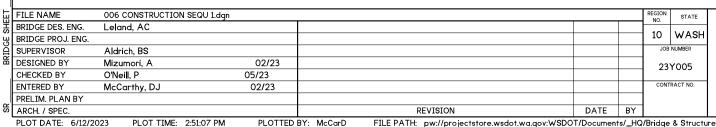
- PIER REPAIRS AND TRANSVERSE STIFFENER INSTALLATION SHALL BE COMPLETED PRIOR TO ANY DECK REMOVAL WORK.
- DECK REPLACEMENT WORK SHALL BE RESTRICTED TO ONE DECK WORK AREA ON THE BRIDGE AT A TIME. THE WIDTH OF DECK WORK AREAS ARE ONE HALF OF THE BRIDGE WIDTH. THE LENGTH OF A DECK WORK AREA SHALL BE LIMITED ACCORDING TO DETAILS IN THE PLANS. DECK WORK AREA LIMITS ARE IDENTIFIED IN SHEET "CONSTRUCTION SEQUENCE
- DECK WORK AREAS MAY BE SUBDIVIDED INTO SMALLER DECK WORK AREAS ALONG THE LENGTH OF THE BRIDGE. IN SPANS 6-8, DECK WORK AREA EDGES SHALL BE LOCATED AT FLOORBEAMS/TRUSS PANEL POINTS.
- THE CONTRACTOR MAY WORK TWO DECK WORK AREAS AT THE SAME TIME AS LONG AS THE DECK WORK AREAS AND ASSOCIATED CONSTRUCTION EQUIPMENT ARE SEPARATED BY AT LEAST 225' AND ON THE SAME SIDE OF THE BRIDGE.
- PRIOR TO DECK REMOVAL WITHIN A DECK WORK AREA (INCLUDING DECK SAWCUTTING, BUT EXCLUDING EXISTING TRAFFIC BARRIER REMOVAL), THE CONTRACTOR SHALL SHIFT AND ANCHOR TEMPORARY BARRIER, AND WITHIN SPANS 1-5
 - INSTALL ALL CROSSFRAME MODIFICATIONS WITHIN 225' OF THE DECK REMOVAL
 - INSTALL ALL BOTTOM LATERAL STRUTS WITHIN 225' OF THE DECK REMOVAL.
 - INSTALL TEMPORARY DECK SUPPORT WITHIN 12' OF THE DECK REMOVAL OR SAWCUT.
 - TEMPORARY CROSSFRAME MODIFICATIONS MAY BE REMOVED WITHIN A SPAN AFTER THE ENTIRE DECK IS REPLACED IN
- THE LENGTH OF DECK REMOVAL WITHIN AN ACTIVE DECK WORK AREA IN SPANS 1-5 AND 9 SHALL NOT EXCEED 15' PRIOR TO PLACING THE NEW REPLACEMENT DECK PANEL(S) IN THEIR FINAL POSITION. THE LENGTH OF DECK REMOVAL WITHIN AN ACTIVE DECK WORK AREA IN SPANS 6-8 SHALL NOT EXCEED ~ 33'-1" PRIOR TO PLACING THE NEW REPLACEMENT DECK PANEL(S) IN THEIR FINAL POSITION.
- 7. THE LENGTH OF UNGROUTED GIRDER HAUNCHES WITHIN AN ACTIVE DECK WORK AREA SHALL NOT EXCEED 60' IN SPANS 1-5 AND 9. THE LENGTH OF UNGROUTED STRINGER HAUNCHES WITHIN AN ACTIVE DECK WORK AREA SHALL NOT EXCEED 100' IN SPANS 6-8. HAUNCHES SHALL BE GROUTED AND CURED PRIOR TO PLACING TRANSVERSE CLOSURES.
- THE LENGTH OF ERECTED DECK PANELS WITHOUT TRANSVERSE CLOSURES WITHIN AN ACTIVE DECK WORK AREA SHALL NOT EXCEED 75' IN SPANS 1-5 AND 9. THE LENGTH OF ERECTED DECK PANELS WITHOUT TRANSVERSE CLOSURES WITHIN AN ACTIVE DECK WORK AREA SHALL NOT EXCEED 100' IN SPANS 6-8.
- ALL TRANSVERSE DECK CLOSURES, CURB CLOSURES AND PANEL EDGEBEAM HAUNCHES WITHIN A DECK WORK AREA SHALL BE PLACED AND ATTAIN THE SPECIFIED STRENGTH IN ORDER FOR THE DECK WORK AREA TO BE CONSIDERED
- 10. PRIOR TO SHIFTING TRAFFIC FROM ONE HALF OF THE BRIDGE TO THE OTHER:
 - (CONSTRUCTION SEQUENCE STEP 1 TO 2, SEE SHEET BA8-BA10)
 - TEMPORARY PANEL EDGEBEAMS AND THEIR HAUNCHES WITHIN SPANS 1-5 AND 9 SHALL BE INSTALLED.
 - TEMPORARY GRADE TRANSITIONS AND JOINT COVERS SHALL BE INSTALLED.
 - TEMPORARY TRAFFIC BARRIER TRANSITIONS SHALL BE INSTALLED.
 - TEMPORARY BARRIER SHALL BE SHIFTED AND ANCHORED AS REQUIRED.
 - ALL GROUT, UHPC AND CONCRETE SHALL ATTAIN SPECIFIED STRENGTHS.
- 11. AFTER COMPLETING A DECK WORK AREA, THE (TRANSVERSELY) ADJACENT DECK WORK AREA SHALL BE WORKED, UNLESS PREVIOUSLY PERFORMED (SEE CONSTRUCTION SEQUENCE STEP 2).
- 12. AFTER TWO ADJACENT (FULL WIDTH SECTION) DECK WORK AREAS ARE COMPLETED, THE LONGITUDINAL DECK CLOSURE BETWEEN THEM SHALL BE PLACED AND ATTAIN THE SPECIFIED STRENGTH. THIS WORK SHALL OCCUR IN THE SPLIT LANE TRAFFIC STAGING CONFIGURATION. (SEE CONSTRUCTION SEQUENCE STEP 3, SEE SHEET BA8-BA10)
- 13. BRIDGE DECK GRINDING FOR PROFILE AND SMOOTHNESS ADJUSTMENTS SHALL BE DONE AFTER THE ENTIRE BRIDGE DECK IS IN PLACE, UNLESS APPROVED OTHERWISE BY THE ENGINEER.
- 14. THE BRIDGE SHALL BE OPENED TO 4 LANES OF TRAFFIC AT SPECIFIED INTERVALS. PRIOR TO OPENING TO TRAFFIC, DECK WORK AREAS SHALL BE COMPLETED SYMMETRICALLY ABOUT THE CENTERLINE OF THE BRIDGE, WITH NO OPEN LONGITUDINAL JOINTS. ALL LONGITUDINAL DECK CLOSURES SHALL HAVE ATTAINED THE SPECIFIED STRENGTH.
- 15. THE BRIDGE SHALL BE OPENED TO 4 LANES OF TRAFFIC PRIOR TO ANY WINTER WORK SHUTDOWN, PRIOR TO OPENING TO TRAFFIC, DECK WORK AREAS SHALL BE COMPLETED SYMMETRICALLY ABOUT THE CENTERLINE OF THE BRIDGE, WITH NO OPEN LONGITUDINAL JOINTS. ALL LONGITUDINAL DECK CLOSURES SHALL HAVE ATTAINED THE SPECIFIED STRENGTH.
- 16. RAILING TRANSITIONS SHALL BE INSTALLED AT THE END OF BRIDGE RAILING RUNS PRIOR TO PLACING TRAFFIC ADJACENT TO THE END OF A BRIDGE RAILING RUN (4 CORNERS TOTAL).

CONSTRUCTION LOAD LIMITATIONS

- CONSTRUCTION LOADS ON THE BRIDGE SHALL BE ASSIGNED TO ONE OF TWO ALLOWANCES: STATIC TEMPORARY WORKS, WHICH ARE DISTRIBUTED LOADS SUCH AS ACCESS AND CONTAINMENT: AND CONSTRUCTION EQUIPMENT, WHICH ARE HEAVY MOVING LOADS. SUCH AS TRUCKS. GANTRIES. AND ANY TRANSPORTED MATERIALS (EXISTING OR NEW).
- THE TRIBUTARY STATIC WEIGHT OF TEMPORARY WORKS SHALL BE LIMITED TO 150 LBS/FT ON EACH GIRDER IN SPANS 1-5 AND 9, AND 83 LBS/FT ON EACH STRINGER IN SPANS 6-8. TEMPORARY DECK SUPPORT DETAILED IN THE PLANS SHALL NOT BE CONSIDERED IN THIS ALLOWANCE.
- THE TOTAL WEIGHT OF CONSTRUCTION EQUIPMENT LOADING ON THE BRIDGE SHALL BE LIMITED TO 100 KIPS AT ALL TIMES. EXCEPT THAT TWO SETS OF CONSTRUCTION EQUIPMENT, EACH LIMITED TO 100 KIPS, MAY BE ALLOWED IF SEPARATED BY THE SPECIFIED MINIMUM DISTANCE FOR TWO CONCURRENT DECK WORK AREAS.
- FURTHER, THE TOTAL WEIGHT OF CONSTRUCTION EQUIPMENT LOADING OPERATING IN THE CENTER WORK ZONE DURING CONSTRUCTION STEP 3 SHALL BE LIMITED TO 50 KIPS. CONSTRUCTION EQUIPMENT SHALL BE LIMITED TO THE EQUIPMENT NECESSARY TO PERFORM THE WORK FROM THE BRIDGE DECK. ALL CONSTRUCTION EQUIPMENT LOADING SHALL BE SUBMITTED AS A TYPE 2E WORKING DRAWING DEMONSTRATING THE ACCEPTABLE WEIGHT AND PLACEMENT OF THE FQUIPMENT
- CONSTRUCTION EQUIPMENT LOADS SHALL CONFORM TO THE LOAD CONFIGURATION SHOWN BELOW. ALTERNATE CONFIGURATIONS MUST BE SHOWN TO GENERATE LESSER LOAD EFFECTS IN THE STRUCTURE, AND SHALL BE SUBMITTED AS A TYPE 2E WORKING DRAWING, WHEN CONSTRUCTION EQUIPMENT (INCLUDING MATERIALS) ARE MOVED ACROSS THE BRIDGE, THEY SHALL BE RESTRICTED TO THE CONSTRUCTION EQUIPMENT LANES SHOWN FOR THE RESPECTIVE TRAFFIC CONFIGURATION (SEE CONSTRUCTION SEQUENCE STEP 1 AND 2. SEE SHEET BA8-BA10).
- 6. THE WEIGHT OF EXISTING ELEMENTS OF THE BRIDGE THAT ARE MOVED FROM THEIR ORIGINAL PLAN LOCATION, AS WELL AS NEW COMPONENTS THAT HAVE NOT YET BEEN PLACED AT THEIR FINAL PLAN LOCATION (SUCH AS DECK PANELS), SHALL BE TREATED AS A CONSTRUCTION EQUIPMENT LOAD. WHEN NEW DECK PANELS ARE SET ON LEVELING BOLTS IN THEIR FINAL PLAN LOCATION, THEY NO LONGER NEED TO BE TREATED AS A CONSTRUCTION EQUIPMENT LOAD.
- MATERIAL FOR TEMPORARY WORKS AND MATERIAL TO BE INCORPORATED INTO THE FINAL WORK SHALL NOT BE STAGED OR STORED ON THE BRIDGE, EXCEPT WHEN EXPLICITLY INCLUDED IN THE LOAD ALLOWANCES ABOVE.
- MATERIAL REMOVED FROM THE BRIDGE, SUCH AS THE EXISTING DECK, SHALL NOT BE STAGED OR STORED ON THE BRIDGE. ONCE MATERIAL IS MOVED FROM ITS ORIGINAL PLAN LOCATION IT SHALL BE REMOVED FROM THE BRIDGE IMMEDIATELY.
- THE CONTRACTOR IS ADVISED THAT THE DECK PANELS HAVE NOT BEEN DESIGNED FOR UNSUPPORTED EDGE LOADING. THE CONTRACTOR SHALL CONFIGURE CONSTRUCTION LOADS OR PROVIDE SUPPORT DURING CONSTRUCTION TO AVOID OVERLOADING DECK PANELS. STRUCTURAL ANALYSIS SUPPORTING THE PLACEMENT OF CONSTRUCTION LOADS SHALL BE SUBMITTED AS A TYPE 2E WORKING DRAWING.



CONSTRUCTION EQUIPMENT LOAD CONFIGURATION









I-90 VANTAGE BRIDGE - REPLACE BRIDGE DECK, SPECIAL REPAIRS & DRAINAGE

CONSTRUCTION SEQUENCE DETAILS 1 OF 5

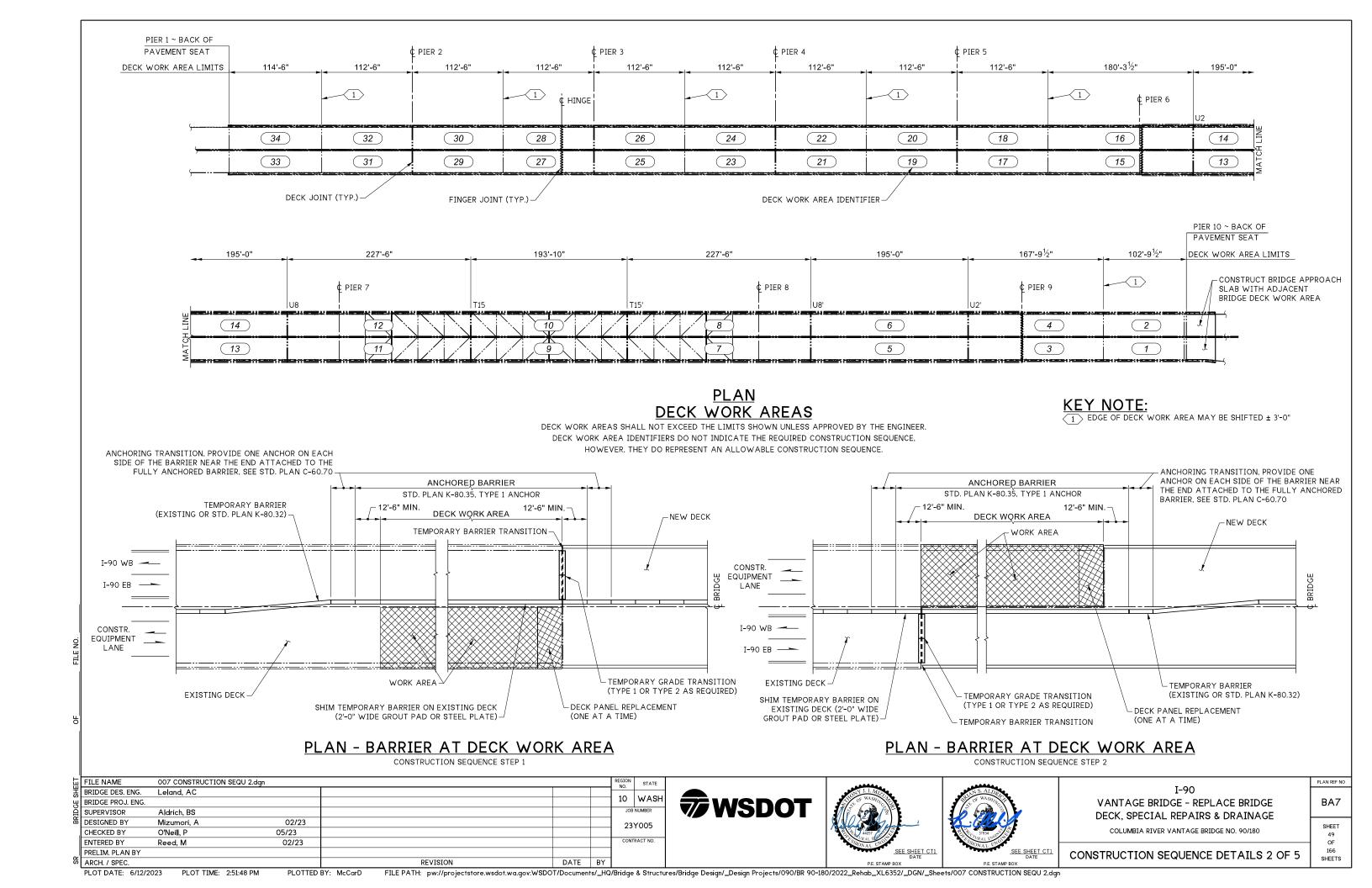
COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

SHEET

PLAN REF NO

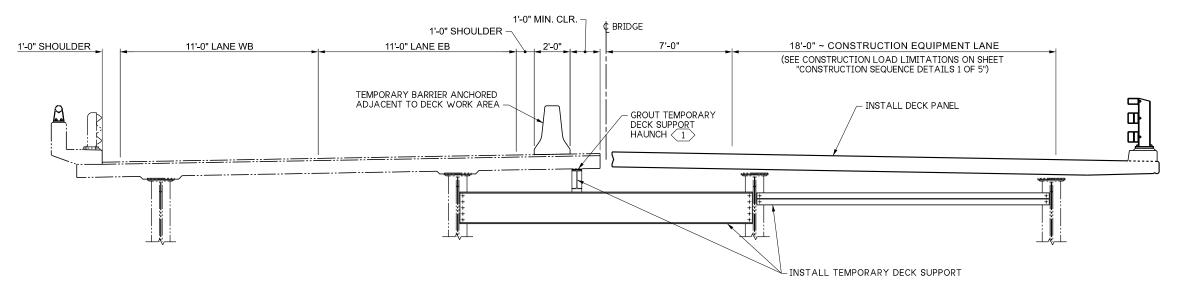
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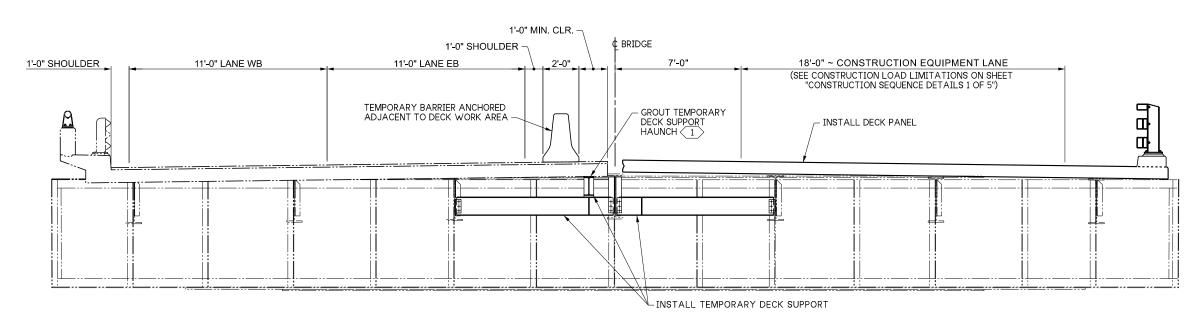


KEY NOTE:

INSTALL TEMPORARY DECK SUPPORT AND HAUNCH GROUT PRIOR TO STEP 1 DECK REMOVAL WORK (INCLUDING SAWCUTTING).



CONSTRUCTION SEQUENCE - STEP 1 APPROACH SPAN DECK WORK AREAS



CONSTRUCTION SEQUENCE - STEP 1 MAIN SPAN DECK WORK AREAS

NOTF:

1. ALTERNATIVELY, THE CONTRACTOR MAY ELECT TO START ON THE OPPOSITE SIDE OF THE BRIDGE (I-90 WESTBOUND LANES).

ᇤ	FILE NAME BRIDGE DES. ENG.	008 CONSTRUCTION SEG	U 3.dgn				REGION NO.	STATE	
뿘	BRIDGE DES. ENG.	Leland, AC) . (A OL I	1.
Ж	BRIDGE PROJ. ENG.						10	WASH	1
ĕ	SUPERVISOR DESIGNED BY	Aldrich, BS					JOB	NUMBER	١ '
æ	DESIGNED BY	Mizumori, A	02/23				23	Y005	
	CHECKED BY	O'Neill, P	05/23] -~	1005	
	ENTERED BY	McCarthy, DJ	02/23				CONT	RACT NO.	
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I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

PLAN REF NO

BA8

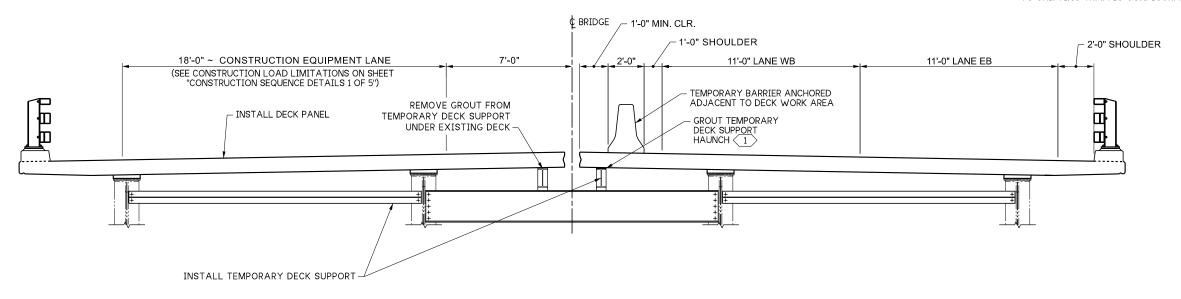
COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

CONSTRUCTION SEQUENCE DETAILS 3 OF 5

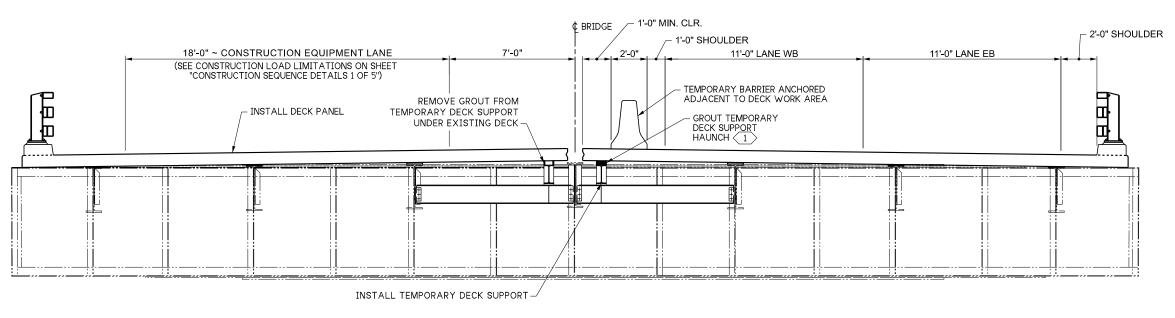
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KEY NOTE:

INSTALL TEMPORARY DECK SUPPORT AND GROUT HAUNCH PRIOR TO SHIFTING TRAFFIC CONFIGURATION FOR STEP 2.



CONSTRUCTION SEQUENCE - STEP 2 APPROACH SPAN DECK WORK AREAS



CONSTRUCTION SEQUENCE - STEP 2 MAIN SPAN DECK WORK AREAS

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	CHECKED BY	Schultz, E	06/23]	1005	
	ENTERED BY	McCarthy, DJ	02/23				CONT	RACT NO.	1
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I-90 VANTAGE BRIDGE - REPLACE BRIDGE DECK, SPECIAL REPAIRS & DRAINAGE COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

CONSTRUCTION SEQUENCE DETAILS 4 OF 5

PLAN REF NO

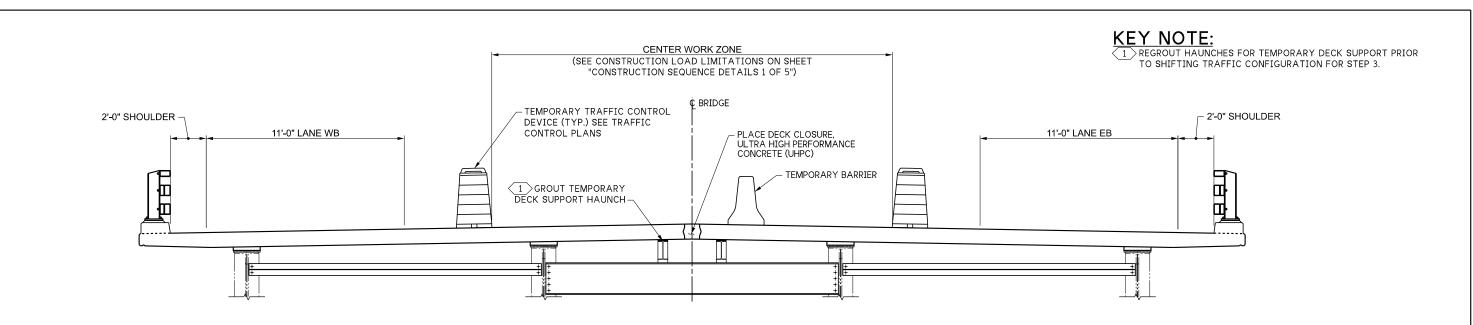
BA9

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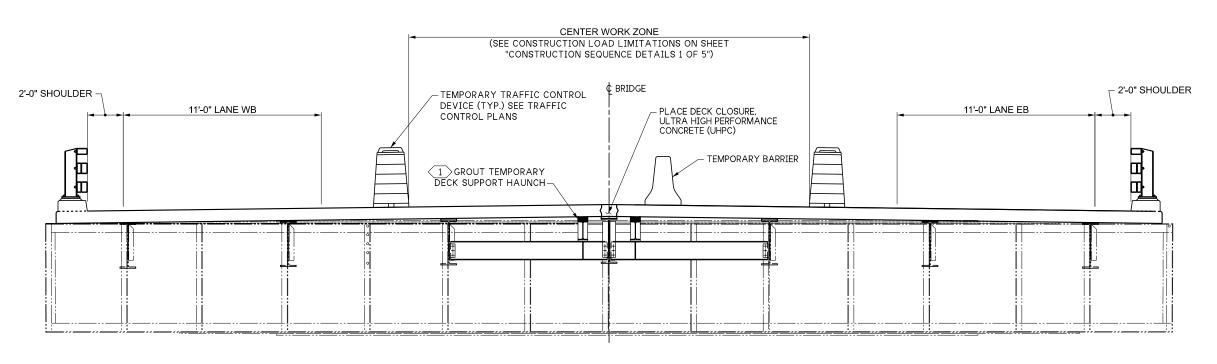
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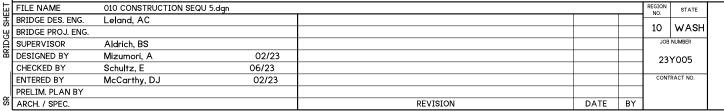
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CONSTRUCTION SEQUENCE - STEP 3 APPROACH SPAN DECK WORK AREAS



CONSTRUCTION SEQUENCE - STEP 3 MAIN SPAN WORK AREAS









I-90 VANTAGE BRIDGE - REPLACE BRIDGE DECK, SPECIAL REPAIRS & DRAINAGE COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

PLAN REF NO

BA10

SHEET

CONSTRUCTION SEQUENCE DETAILS 5 OF 5

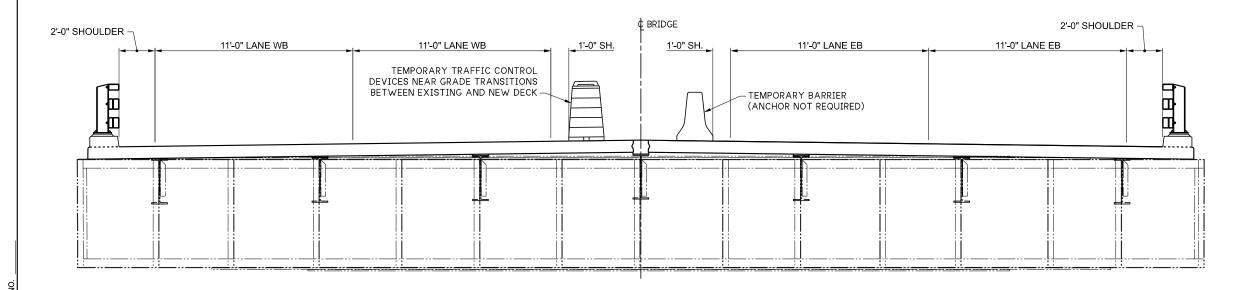
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2'-0" SHOULDER ¢ BRIDGE 2'-0" SHOULDER -11'-0" LANE WB 11'-0" LANE WB 1'-0" SH 11'-0" LANE EB 11'-0" LANE EB <u>1'-0" SH.</u> TEMPORARY TRAFFIC CONTROL DEVICES NEAR GRADE TRANSITIONS BETWEEN EXISTING AND NEW DECK TEMPORARY BARRIER (ANCHORS NOT REQUIRED) 頄 TEMPORARY DECK SUPPORT AND PANEL EDGEBEAM (TYP., NEAR GRADE TRANSITIONS BETWEEN EXISTING AND NEW DECK.)

TRAFFIC CONFIGURATION - FULL BRIDGE OPENING APPROACH SPANS



TRAFFIC CONFIGURATION - FULL BRIDGE OPENING MAIN SPANS

FILE NAME 011 TEMPORARY TRAFFIC CONFIG.dgn BRIDGE DES. ENG. 10 WASH BRIDGE PROJ. ENG. JOB NUMBER SUPERVISOR Aldrich BS DESIGNED BY 02/23 23Y005 CHECKED BY O'Neill, P 05/23 ENTERED BY McCarthy, DJ 02/23 PRELIM. PLAN BY G ARCH. / SPEC.







I-90 VANTAGE BRIDGE - REPLACE BRIDGE DECK, SPECIAL REPAIRS & DRAINAGE

FULL BRIDGE OPENING NOTES:

1. THE CONTRACTOR SHALL BE REQUIRED TO OPEN THE BRIDGE TO FOUR LANES OF TRAFFIC INTERMITTENTLY DURING THE DECK REPLACEMENT WORK AS SPECIFIED

IN THE CONTRACT SEE SPECIAL PROVISIONS

TRAFFIC, THE CONTRACTOR SHALL:

THE BRIDGE CENTERLINE.

SPECIFIED STRENGTH.

AND EXISTING DECK WORK.

AND FREE FROM ALL SAWCUTS.

2. PRIOR TO OPENING THE BRIDGE TO FOUR LANES OF

- INSTALL DECK PANELS SYMMETRICALLY ABOUT

- INSTALL TRANSVERSE AND LONGITUDINAL UHPC

DECK CLOSURES BETWEEN ALL ADJACENT DECK PANELS. DECK CLOSURES SHALL ATTAIN THE

- INSTALL TEMPORARY PANEL EDGE BEAMS, STEEL GRADE TRANSITION PLATES AND BARRIER TRANSITIONS AT ALL INTERFACES BETWEEN NEW

- EXISTING BRIDGE DECK AREAS SHALL BE INTACT

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

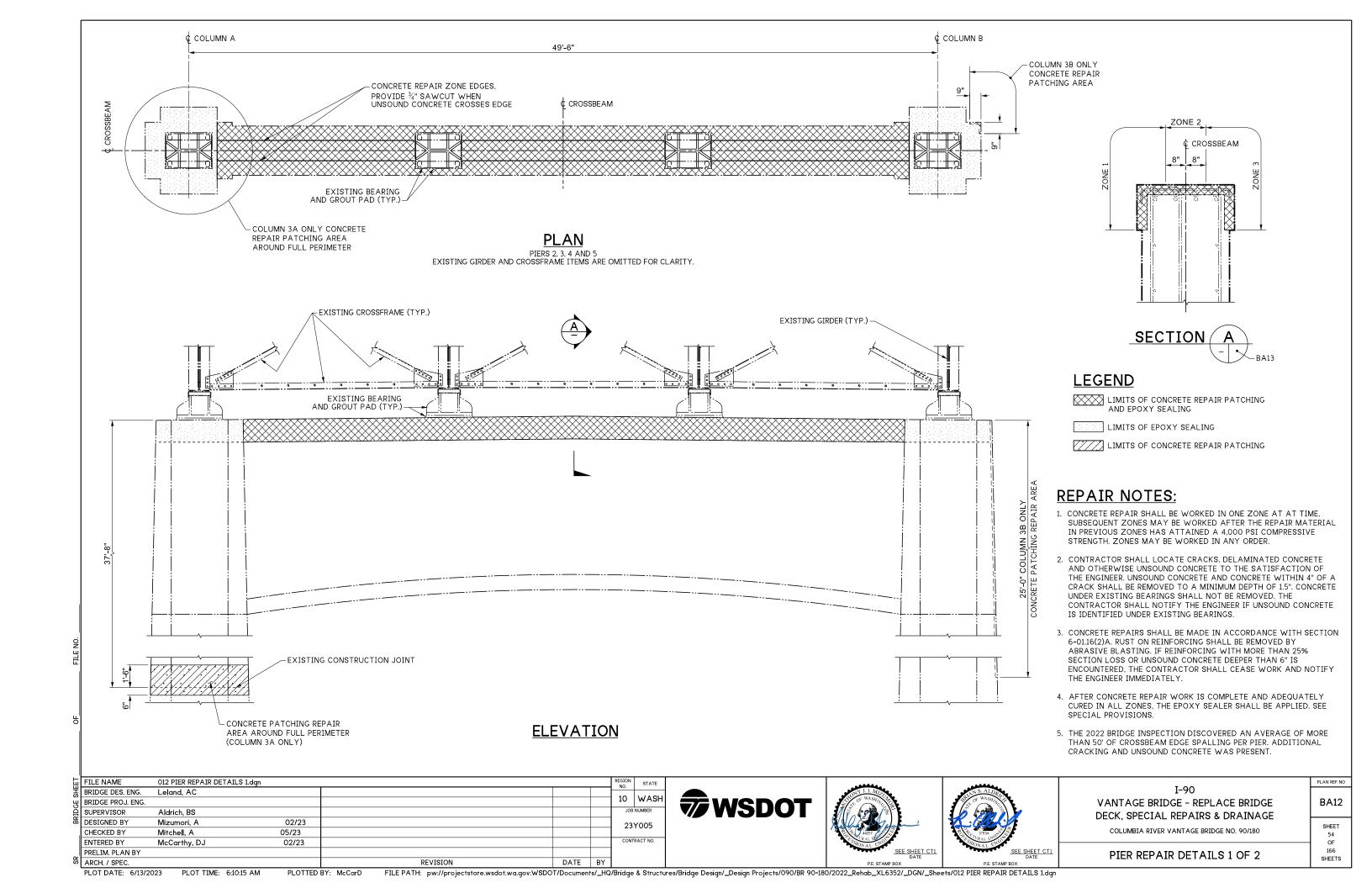
TEMPORARY TRAFFIC CONFIGURATION

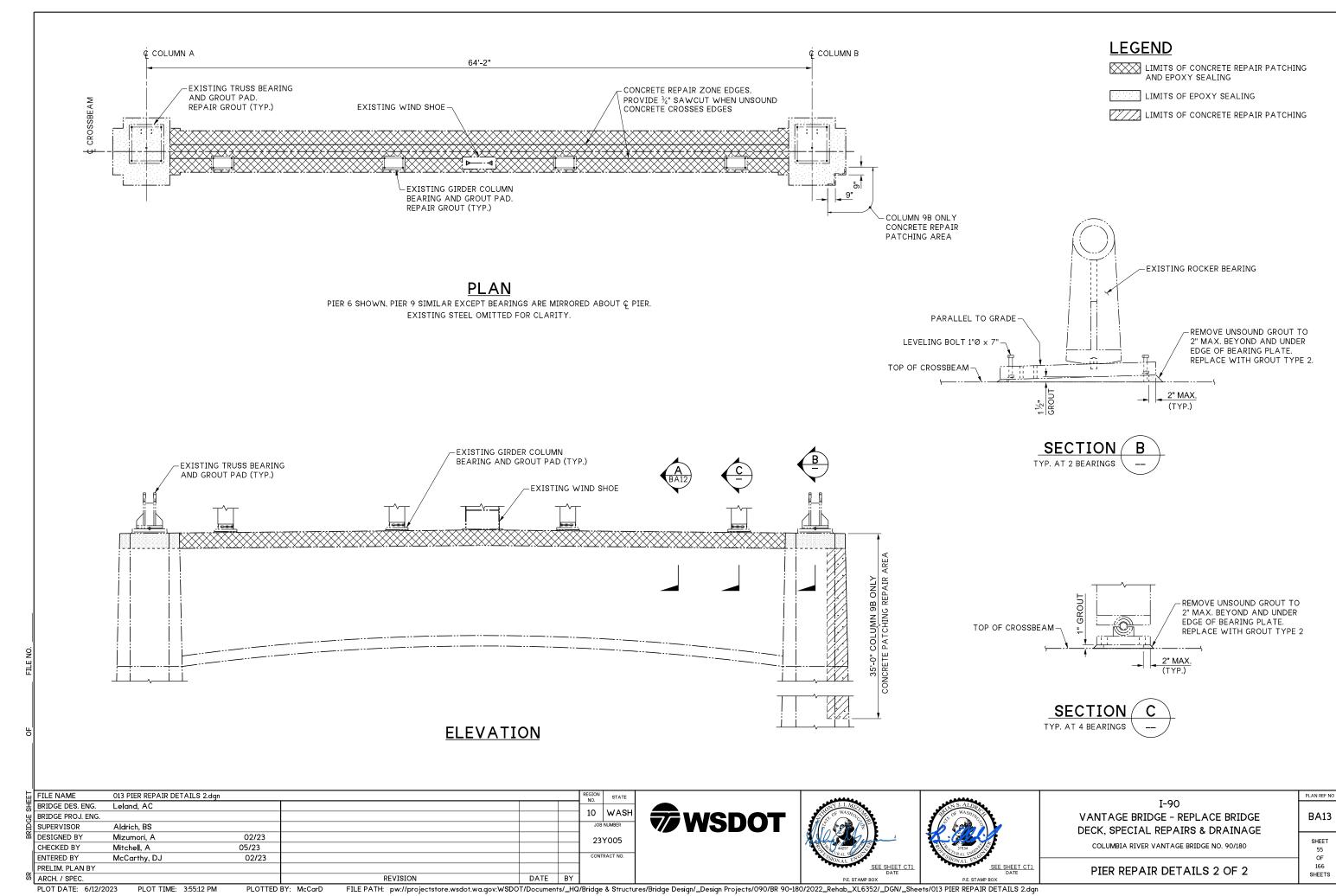
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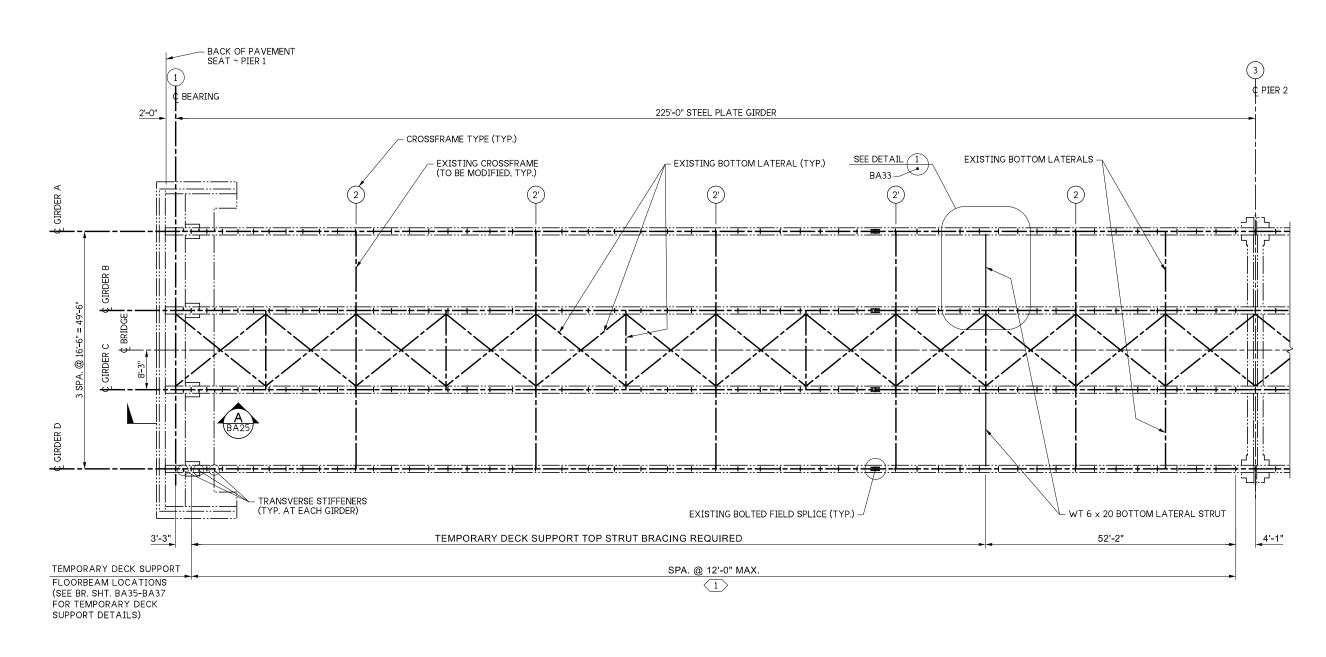
PLAN REF NO

BA11

SHEET 53 OF 166







FRAMING PLAN DETAILS 1 OF 11

KEY NOTE:

TEMPORARY SUPPORT FLOORBEAMS ARE REQUIRED AT ENDS, INTERMEDIATE LOCATIONS TO BE DETERMINED BY THE CONTRACTOR, TEMPORARY SUPPORT FLOOR BEAMS AND TOP STRUTS SHALL BE LOCATED AT EXISTING STIFFENERS ON THE STEEL GIRDERS.

PLAN REF NO

BA14

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뿛	FILE NAME BRIDGE DES. ENG.	Leland, AC							
끯	BRIDGE PROJ. ENG.						10	WASH	(
ĕ	SUPERVISOR DESIGNED BY	Aldrich, BS					JOB	NUMBER	l '
æ	DESIGNED BY	Mizumori, A	02/23				23	Y005	
	CHECKED BY	Schultz, E	06/23] -~	1005	
	ENTERED BY	McCarthy, DJ	02/23				CONT	RACT NO.	
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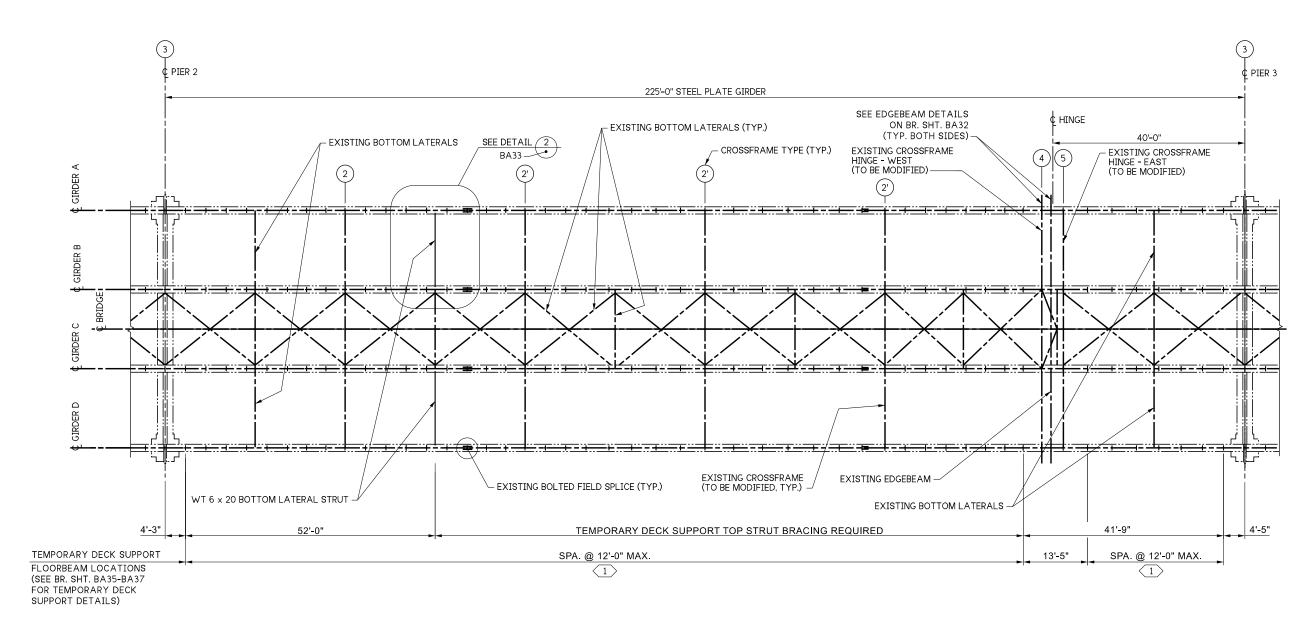
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I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

FRAMING PLAN DETAILS 1 OF 11

PLOT DATE: 6/12/2023 PLOT TIME: 2:57:52 PM PLOTTED BY: McCarD FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/014 FRAMING PLAN 01.dgn



FRAMING PLAN DETAILS 2 OF 11

KEY NOTE:

TEMPORARY SUPPORT FLOORBEAMS ARE REQUIRED AT ENDS, INTERMEDIATE LOCATIONS TO BE DETERMINED BY THE CONTRACTOR. TEMPORARY SUPPORT FLOOR BEAMS AND TOP STRUTS SHALL BE LOCATED AT EXISTING STIFFENERS ON THE STEEL GIRDERS.

PLAN REF NO

BA15

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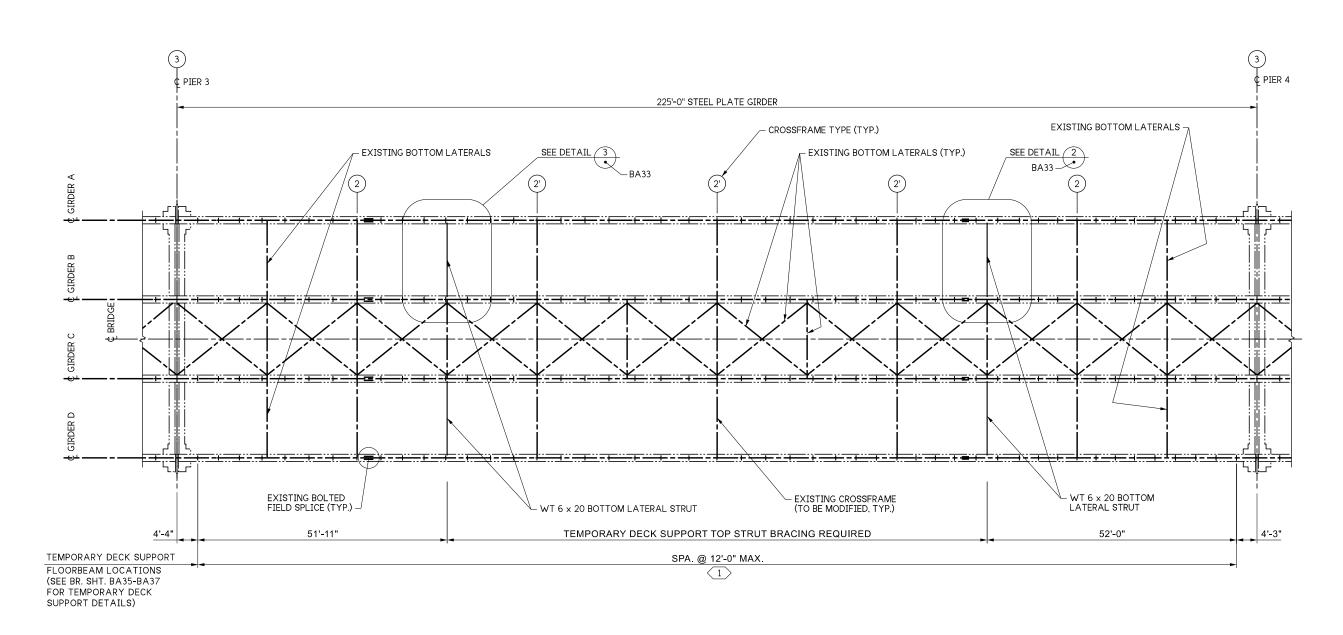


I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

FRAMING PLAN DETAILS 2 OF 11

PLOT DATE: 6/12/2023 PLOT TIME: 2:58:33 PM PLOTTED BY: McCarD FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/015 FRAMING PLAN 02.dgn



FRAMING PLAN DETAILS 3 OF 11

KEY NOTE:

TEMPORARY SUPPORT FLOORBEAMS ARE REQUIRED AT ENDS, INTERMEDIATE LOCATIONS TO BE DETERMINED BY THE CONTRACTOR. TEMPORARY SUPPORT FLOOR BEAMS AND TOP STRUTS SHALL BE LOCATED AT EXISTING STIFFENERS ON THE STEEL GIRDERS.

PLAN REF NO

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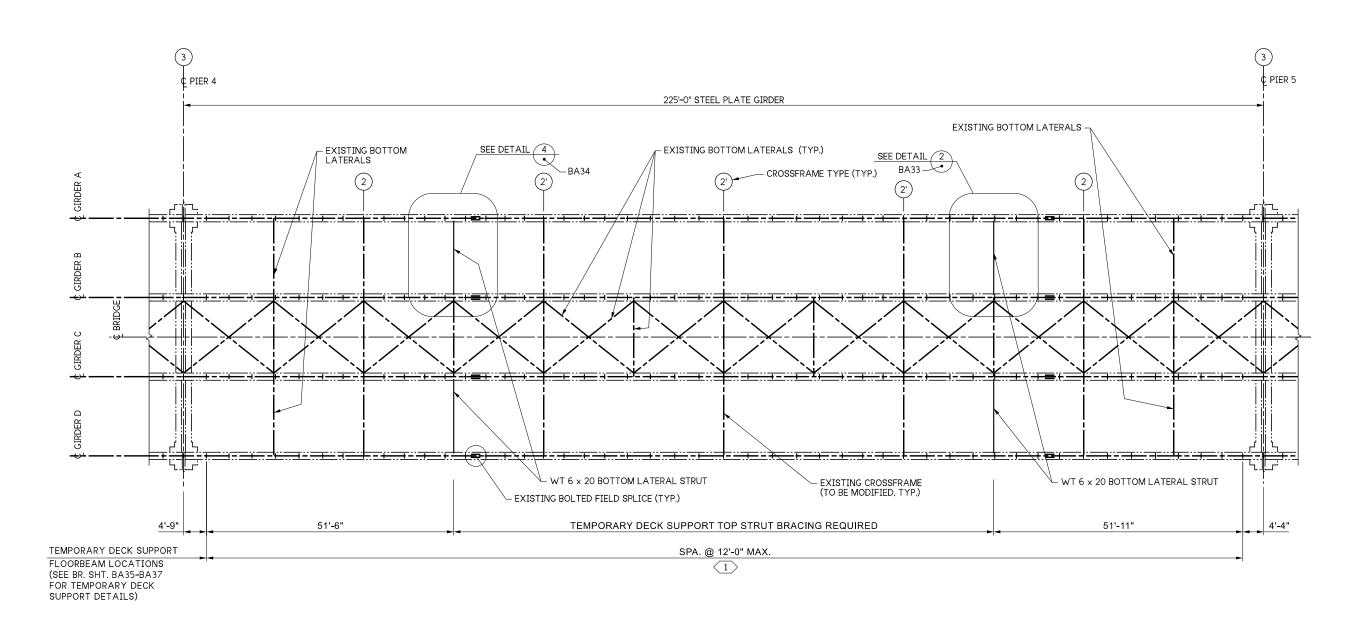


I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

FRAMING PLAN DETAILS 3 OF 11

PLOT DATE: 6/12/2023 PLOT TIME: 2:59:59 PM PLOTTED BY: McCarD FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/016 FRAMING PLAN 03.dgn



FRAMING PLAN DETAILS 4 OF 11

KEY NOTE:

TEMPORARY SUPPORT FLOORBEAMS ARE REQUIRED AT ENDS, INTERMEDIATE LOCATIONS TO BE DETERMINED BY THE CONTRACTOR. TEMPORARY SUPPORT FLOOR BEAMS AND TOP STRUTS SHALL BE LOCATED AT EXISTING STIFFENERS ON THE STEEL GIRDERS.

PLAN REF NO

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	ENTERED BY	McCarthy, DJ	02/23						CONT	RACT NO.	l
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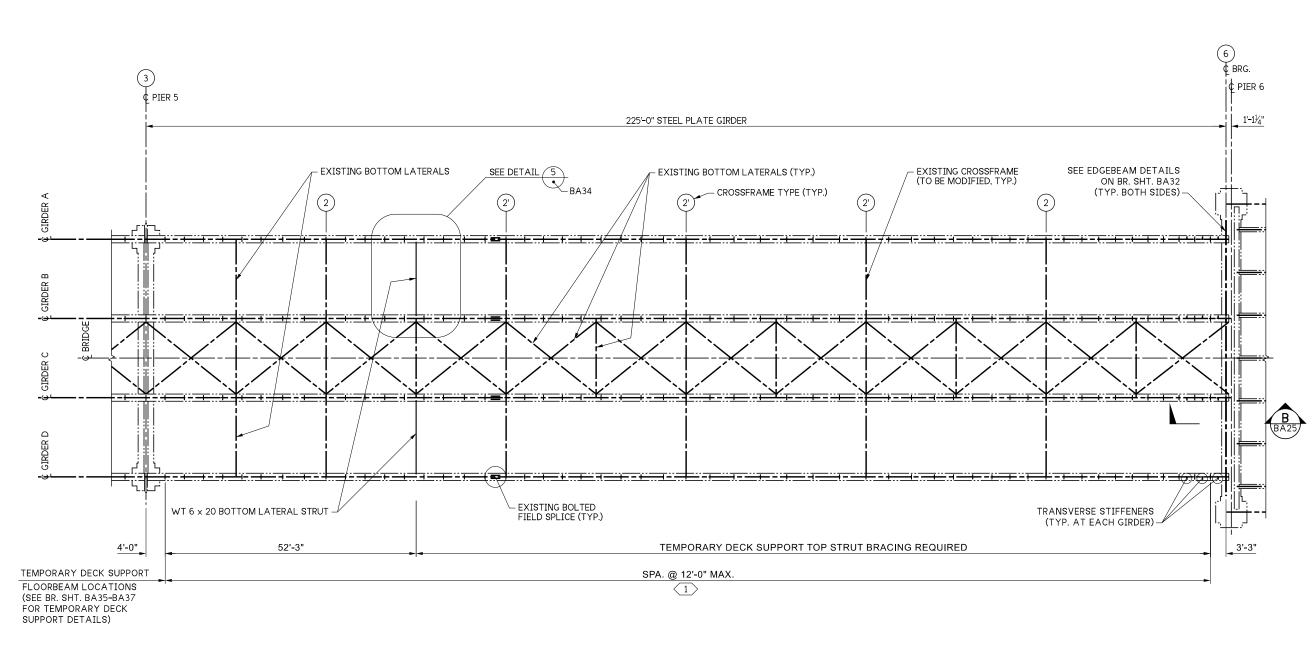


I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

FRAMING PLAN DETAILS 4 OF 11

FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/017 FRAMING PLAN 04.dgn



FRAMING PLAN DETAILS 5 OF 11

KEY NOTE:

TEMPORARY SUPPORT FLOORBEAMS ARE REQUIRED AT ENDS, INTERMEDIATE LOCATIONS TO BE DETERMINED BY THE CONTRACTOR. TEMPORARY SUPPORT FLOOR BEAMS AND TOP STRUTS SHALL BE LOCATED AT EXISTING STIFFENERS ON THE STEEL GIRDERS.

PLAN REF NO

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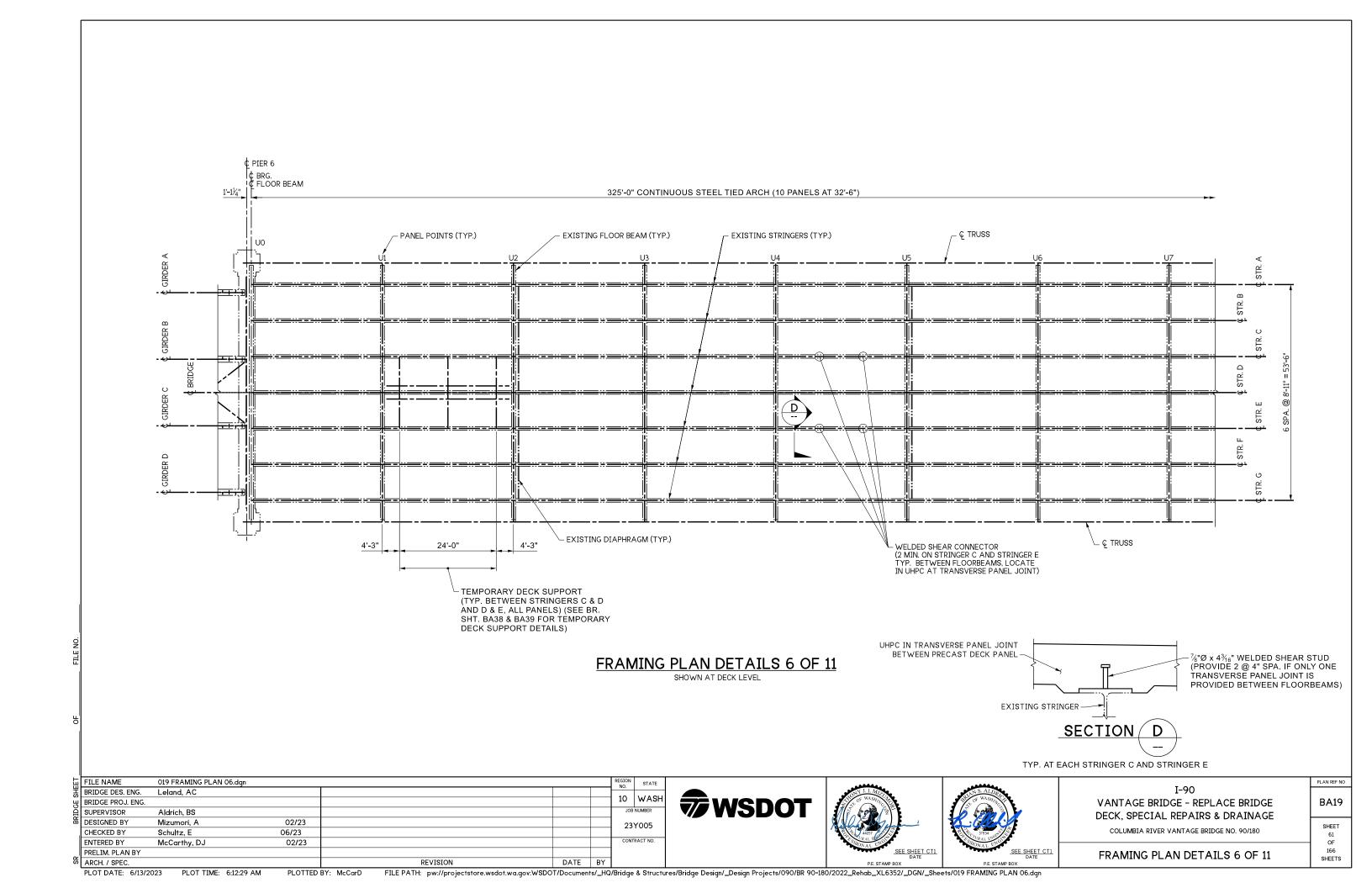
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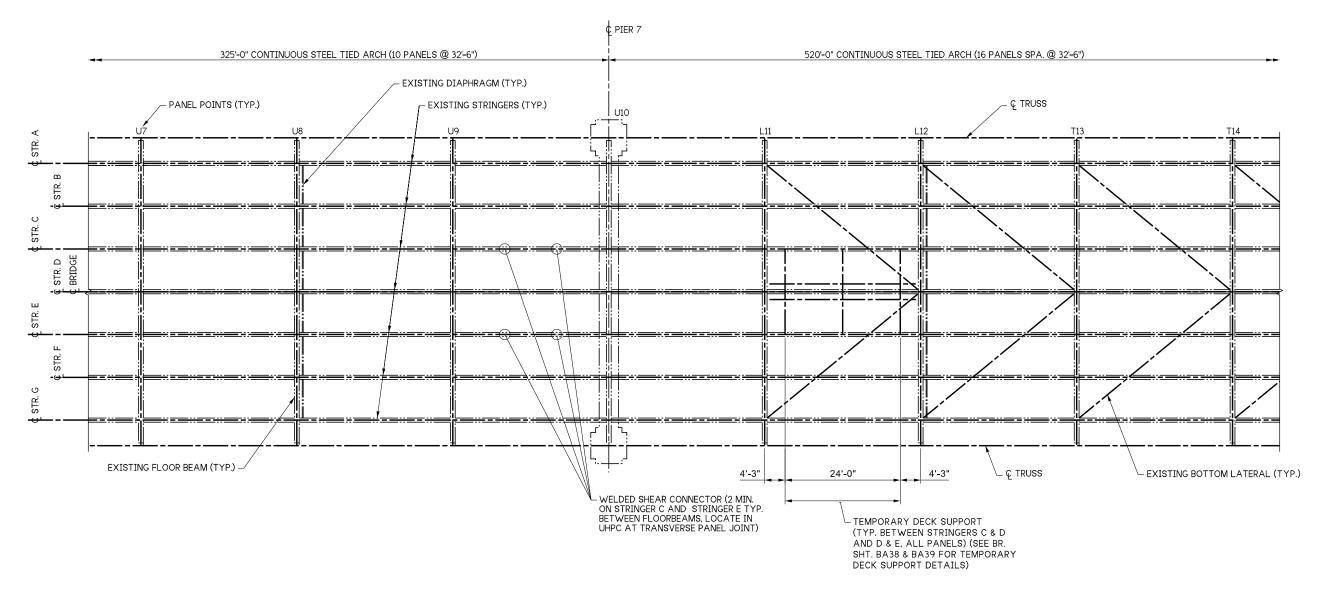
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VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

FRAMING PLAN DETAILS 5 OF 11

PLOT DATE: 6/12/2023 PLOT TIME: 3:01:25 PM PLOTTED BY: McCarD FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/018 FRAMING PLAN 05.dgn





FRAMING PLAN DETAILS 7 OF 11

SHOWN AT DECK LEVEL

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ĕ	SUPERVISOR	Aldrich, BS					JOB	NUMBER	l
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VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE
COLUMBIA DIVED VANITACE DDIDCE NO 00/100

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

FRAMING PLAN DETAILS 7 OF 11

PLOT DATE: 6/12/2023 PLOT TIME: 3:02:57 PM PLOTTED BY: McCarD SHEET 62 OF 166

PLAN REF NO

BA20

FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/020 FRAMING PLAN 07.dgn

520'-0" CONTINUOUS STEEL TIED ARCH (16 PANELS SPA. @ 32'-6") _ Ç TRUSS - PANEL POINTS (TYP.) - EXISTING FLOOR BEAM (TYP.) - EXISTING STRINGERS (TYP.) WELDED SHEAR CONNECTOR (2 MIN. ON STRINGER C AND STRINGER E TYP. BETWEEN FLOORBEAMS, LOCATE IN UHPC AT TRANSVERSE PANEL JOINT) ─ EXISTING DIAPHRAGM (TYP.) - EXISTING BOTTOM LATERAL (TYP.) 4'-3" 24'-0" 4'-3" _ Ç TRUSS - TEMPORARY DECK SUPPORT (TYP. BETWEEN STRINGERS C & D AND D & E, ALL PANELS) (SEE BR. SHT. BA38 & BA39 FOR TEMPORARY

FRAMING PLAN DETAILS 8 OF 11

SHOWN AT DECK LEVEL

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ᇤ	FILE NAME BRIDGE DES. ENG.	021 FRAMING PLAN 08.dgn					REGION NO.	STATE	
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DECK SUPPORT DETAILS)

I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE
COLUMBIA DIVED VANTACE DRIDGE NO. 00/100

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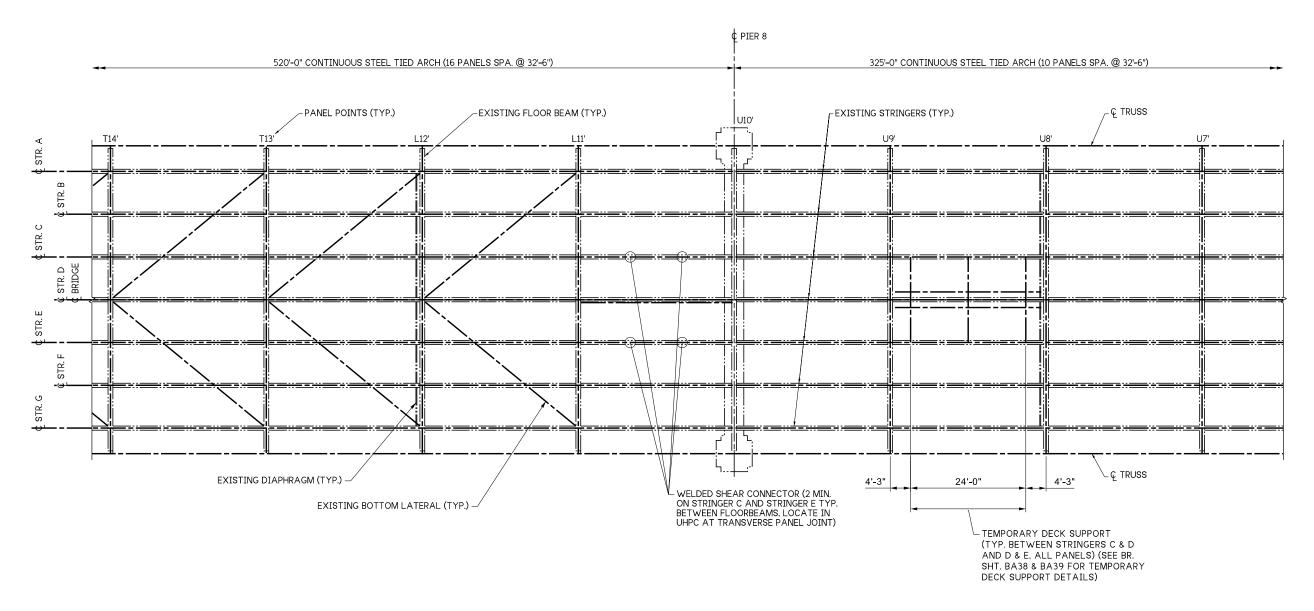
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COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

FRAMING PLAN DETAILS 8 OF 11

PLOT DATE: 6/12/2023 PLOT TIME: 3:03:40 PM PLOTTED BY: McCarD FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/021 FRAMING PLAN 08.dgn



FRAMING PLAN DETAILS 9 OF 11

SHOWN AT DECK LEVEL

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ᇤ	FILE NAME BRIDGE DES. ENG.	022 FRAMING PLAN 09.dgn					REGION NO.	STATE	
뿛	BRIDGE DES. ENG.	Leland, AC) (A OLL	
Ж	BRIDGE PROJ. ENG.						10	WASH	
ĕ	SUPERVISOR DESIGNED BY	Aldrich, BS					JOB	NUMBER	
Æ	DESIGNED BY	Mizumori, A	02/23				23	Y005	
	CHECKED BY	Schultz, E	06/23					1005	
	ENTERED BY	McCarthy, DJ	02/23				CONT	RACT NO.	
	PRELIM. PLAN BY								
SS	ARCH. / SPEC.			REVISION	DATE	BY			ı





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I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

PLAN REF NO

BA22

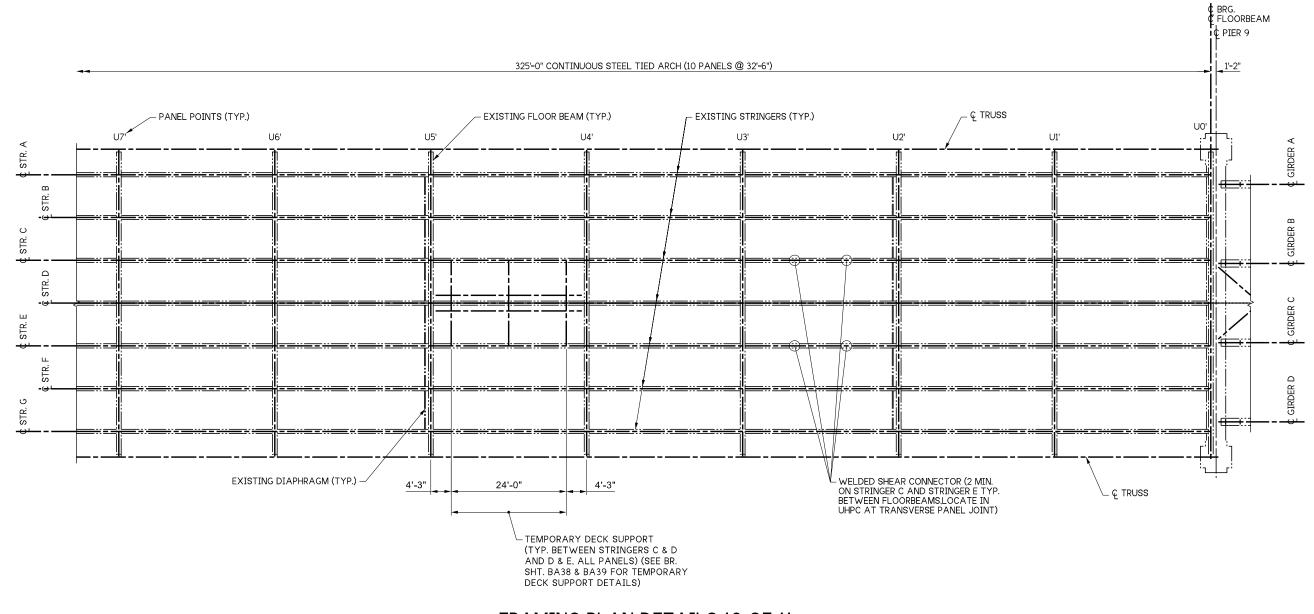
SHEET

OF

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

FRAMING PLAN DETAILS 9 OF 11

PLOT DATE: 6/12/2023 PLOT TIME: 3:04:20 PM PLOTTED BY: McCarD FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/022 FRAMING PLAN 09.dgn



FRAMING PLAN DETAILS 10 OF 11

SHOWN AT DECK LEVEL

- 1									
ᇤ	FILE NAME	023 FRAMING PLAN 10.dgn					REGION NO.	STATE	
뿛	FILE NAME BRIDGE DES. ENG.	Leland, AC							١.
Ж	BRIDGE PROJ. ENG.						10	WASH	
ĕ	SUPERVISOR DESIGNED BY	Aldrich, BS					JOB	NUMBER	'
æ	DESIGNED BY	Mizumori, A	02/23				23.	Y005	
	CHECKED BY	Schultz, E	06/23				23	1003	
	ENTERED BY	McCarthy, DJ	02/23				CONT	RACT NO.	1
J	PRELIM. PLAN BY								
SR	ARCH. / SPEC.			REVISION	DATE	BY			

PLOT DATE: 6/12/2023 PLOT TIME: 3:05:16 PM







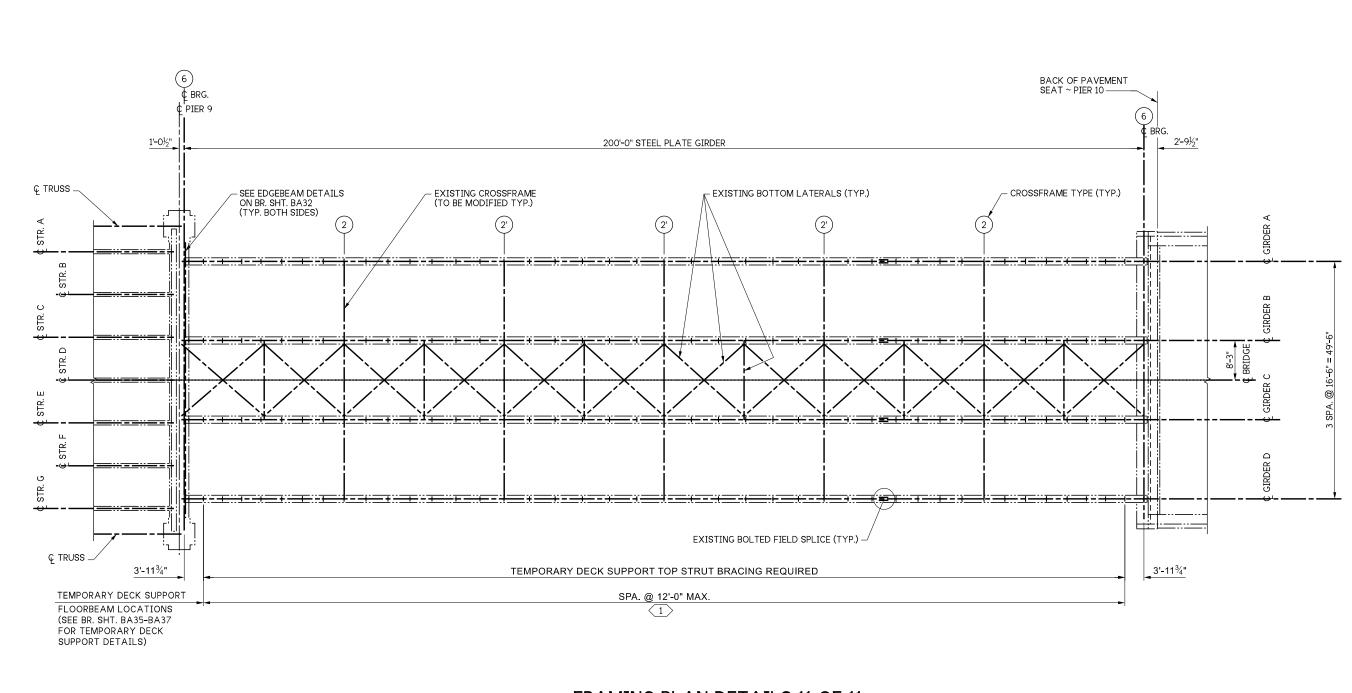
I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE
COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

PLAN REF NO

BA23

FRAMING PLAN DETAILS 10 OF 11

PLOTTED BY: McCarD FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/023 FRAMING PLAN 10.dgn



FRAMING PLAN DETAILS 11 OF 11

KEY NOTE:

1 TEMPORARY SUPPORT FLOORBEAMS ARE REQUIRED AT ENDS, INTERMEDIATE LOCATIONS TO BE DETERMINED BY THE CONTRACTOR. TEMPORARY SUPPORT FLOOR BEAMS AND TOP STRUTS SHALL BE LOCATED AT EXISTING STIFFENERS ON THE STEEL GIRDERS.

PLAN REF NO

BA24

SHEET

	FILE NAME	024 FRAMING PLAN 11.dgn					REGION NO.	STATE	
뿛	BRIDGE DES. ENG.	Leland, AC							i
ij	BRIDGE PROJ. ENG.						10	WASH	i
ĕ	SUPERVISOR	Aldrich, BS					JOB	NUMBER	i
Ж	DESIGNED BY	Mizumori, A	02/23				23	i	
	CHECKED BY	Schultz, E	06/23					. 003	i
	ENTERED BY	McCarthy, DJ	02/23				CONT	RACT NO.	i
	PRELIM. PLAN BY								i
ß	ARCH. / SPEC.			REVISION	DATE	BY	l		i





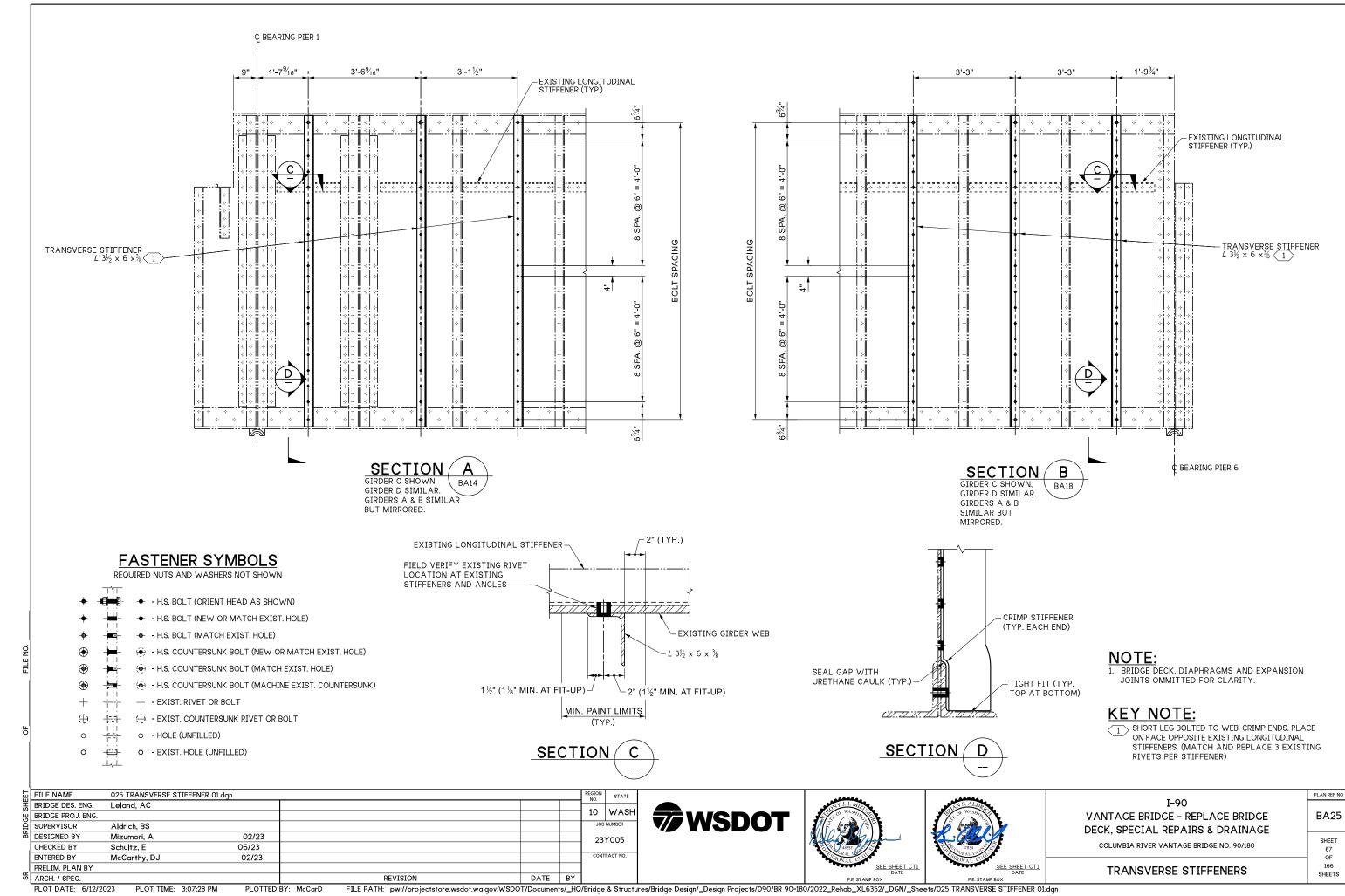


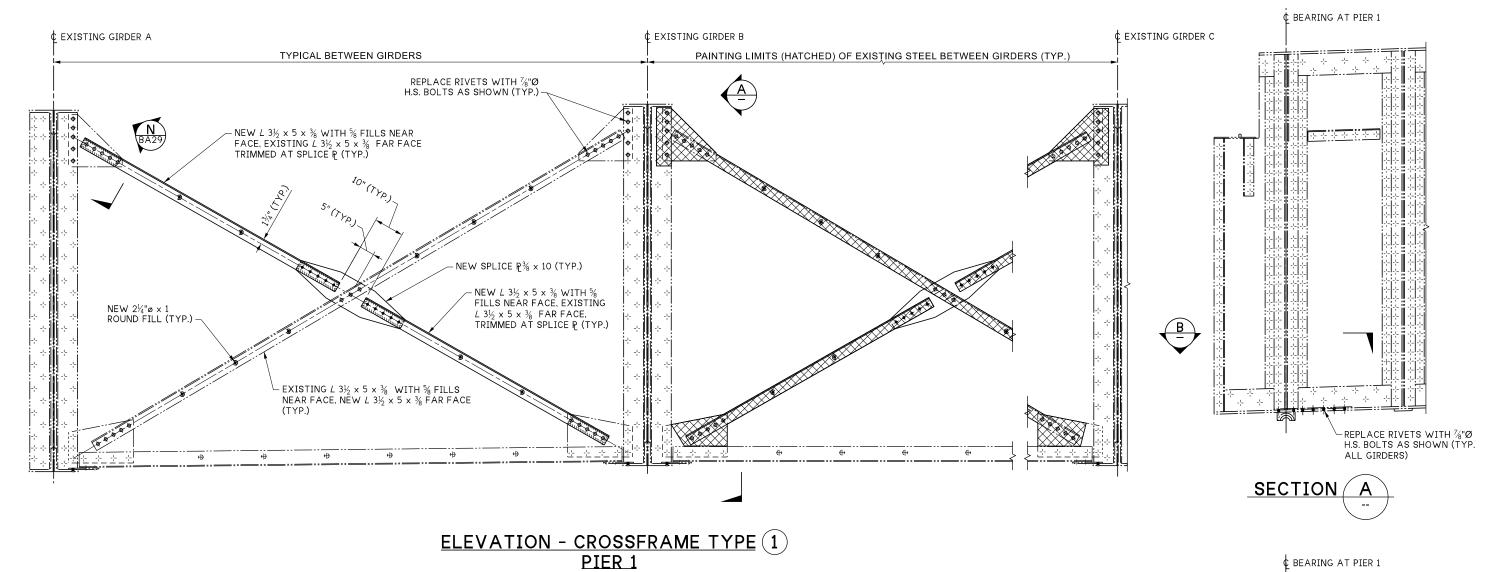
I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

FRAMING PLAN DETAILS 11 OF 11

PLOT DATE: 6/12/2023 PLOT TIME: 3:06:03 PM PLOTTED BY: McCarD FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/024 FRAMING PLAN 11.dgn





CROSSFRAME MODIFICATION NOTES:

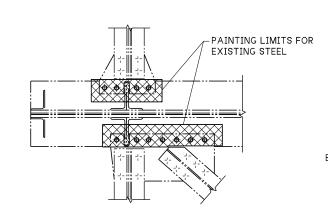
- 1. AT ANY SECTION OF THE BRIDGE WITH A CROSSFRAME, NO MORE THAN ONE DIAGONAL BRACE OR BOTTOM CHORD BETWEEN GIRDER A AND GIRDER D MAY BE DISCONNECTED AT A TIME. THIS INCLUDES RIVETS AT MEMBER ENDS AS WELL AS RIVETS IN GUSSET PLATES.
- 2. AT ANY CROSSFRAME BETWEEN TWO GIRDERS, THE PAIR OF DISCONTINUOUS BRACES (AND CENTER SPLICE PLATE) SHALL BE INSTALLED PRIOR TO THE CONTINUOUS BRACE.
- 3. AT ANY CROSSFRAME NODE WHERE RIVETS IN GIRDER WEBS ARE BEING REPLACED, RIVETS SHALL BE REPLACED WITH TENSIONED H.S. BOLTS ONE AT A TIME.
- 4. AT ANY CONNECTION BETWEEN TOP CHORD EDGEBEAM MEMBERS AND GIRDER STIFFENERS (AT PIER 2-5), RIVETS SHALL BE REPLACED WITH TENSIONED H.S. BOLTS ONE AT A TIME.
- 5. ALL DOUBLE ANGLE MEMBER MODIFICATIONS SHALL ORIENT THE SHORT LEGS BACK TO BACK UNLESS NOTED OTHERWISE.

FASTENER SYMBOLS

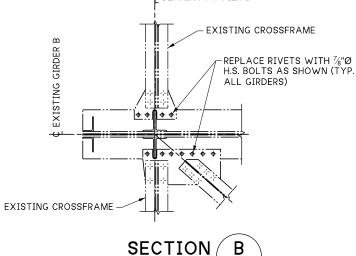
REQUIRED NUTS AND WASHERS NOT SHOWN

- + -H.S. BOLT (ORIENT HEAD AS SHOWN)
 + -H.S. BOLT (NEW OR MATCH EXIST. HOLE)
 + -H.S. BOLT (MATCH EXIST. HOLE)
- → → + H.S. COUNTERSUNK BOLT (NEW OR MATCH EXIST. HOLE)
- ⊕ + H.S. COUNTERSUNK BOLT (MATCH EXIST. HOLE)

 ⊕ + H.S. COUNTERSUNK BOLT (MACHINE EXIST. COUNTERSUNK)
- + + + EXIST. RIVET OR BOLT
- (EXIST. COUNTERSUNK RIVET OR BOLT
- O HOLE (UNFILLED)
- o EXIST. HOLE (UNFILLED)







SEE "PAINTING LIMITS DETAIL" THIS SHEET

- 1									
ᇤ	FILE NAME 026 CROSSFRAME PIER 1.dgn						REGION NO.	STATE	
뿘	BRIDGE DES. ENG.	Leland, AC							i
	BRIDGE PROJ. ENG.						10	WASH	ı
ĕ	SUPERVISOR	Aldrich, BS					JOB	NUMBER	ı
쁊	DESIGNED BY	Mizumori, A	02/23				23	Y005	ı
	CHECKED BY	Sawahata, D	06/23						ı
	ENTERED BY	McCarthy, DJ	02/23				CONT	RACT NO.	ı
	PRELIM. PLAN BY								ı
S	ARCH. / SPEC.			REVISION	DATE	BY			i







I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

TYPE 1 - PIER 1

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

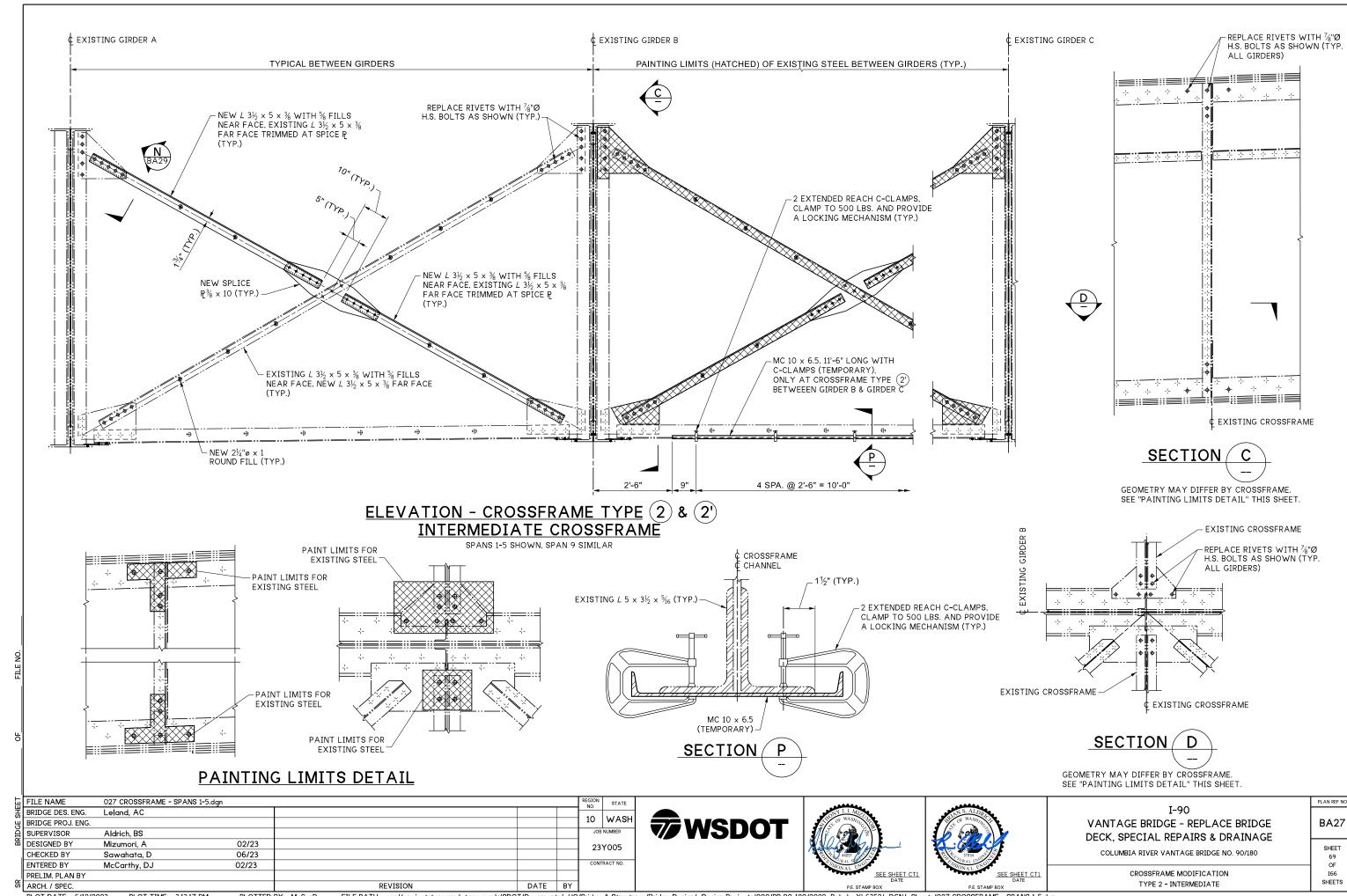
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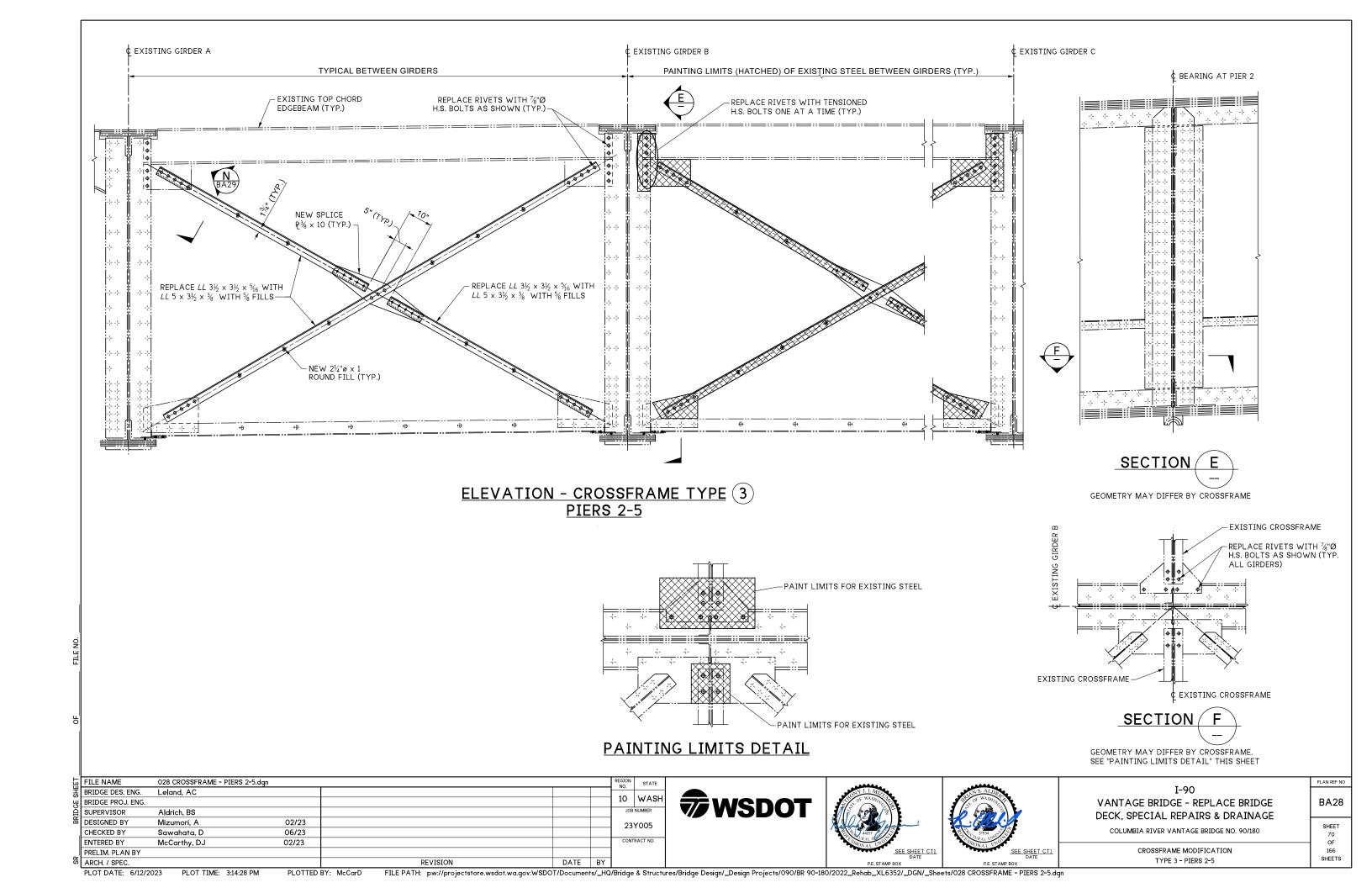
E NO. 90/180 SHEET 68 OF 166 SHEETS

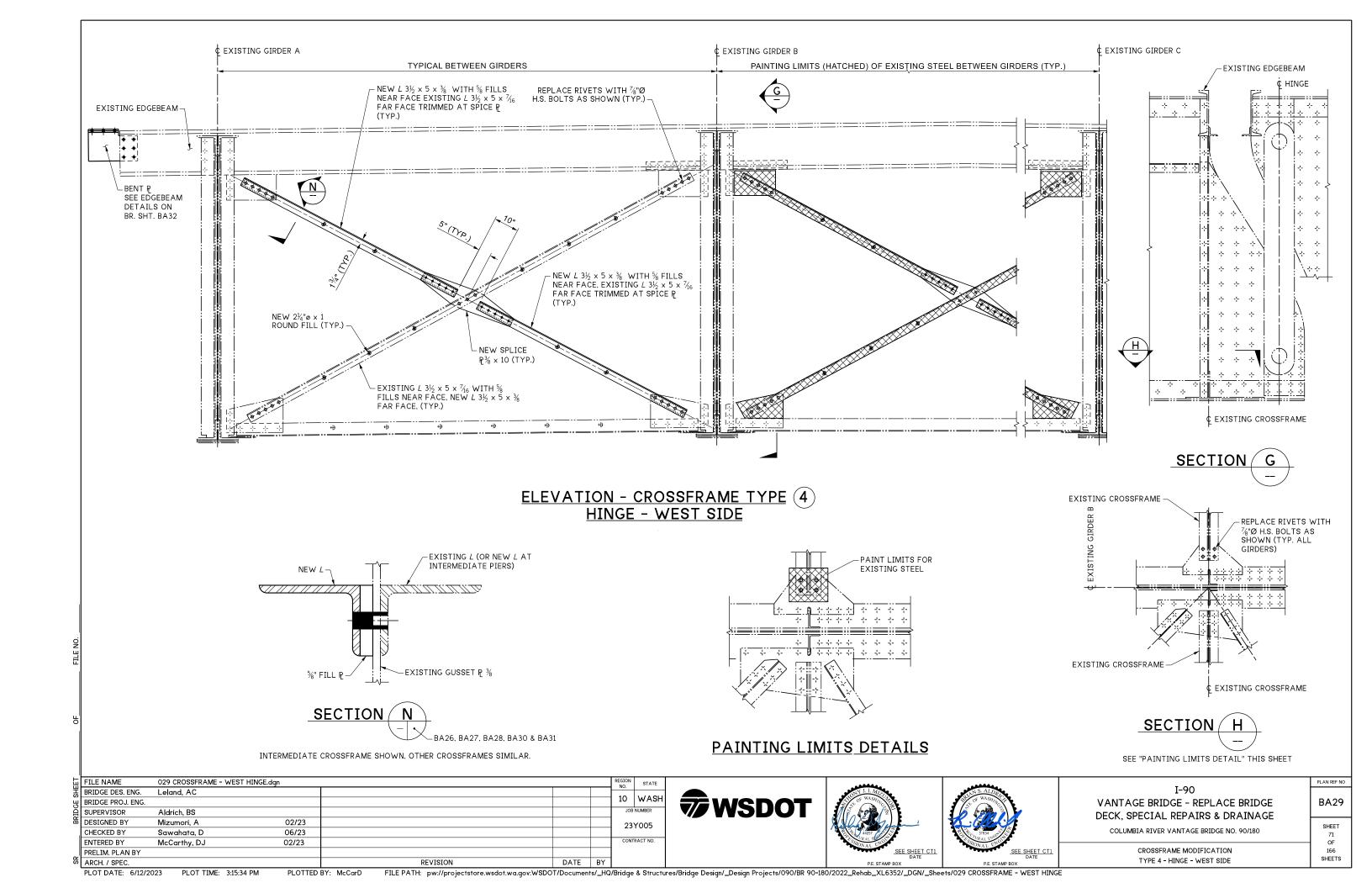
PLAN REF NO

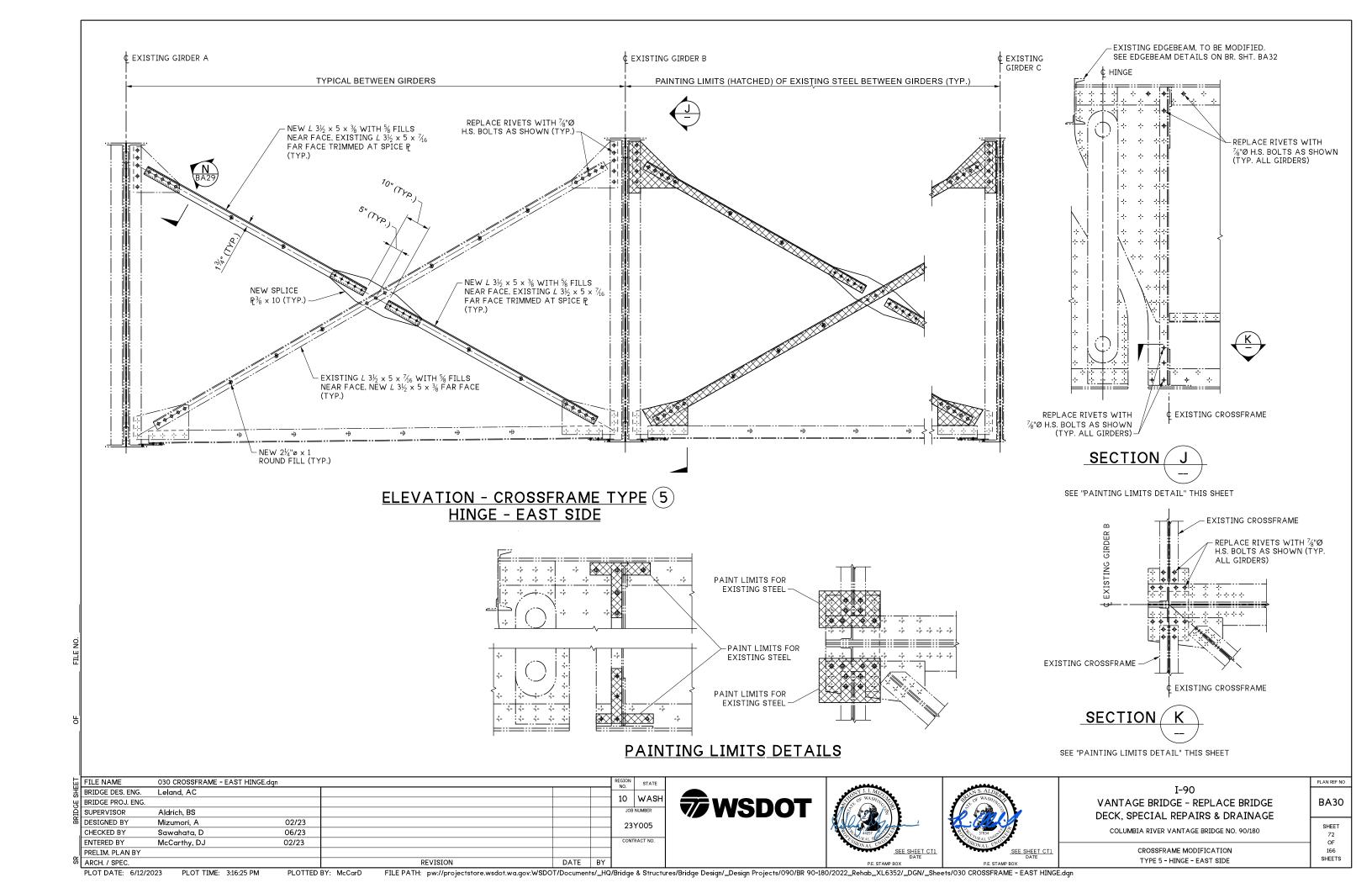
BA26

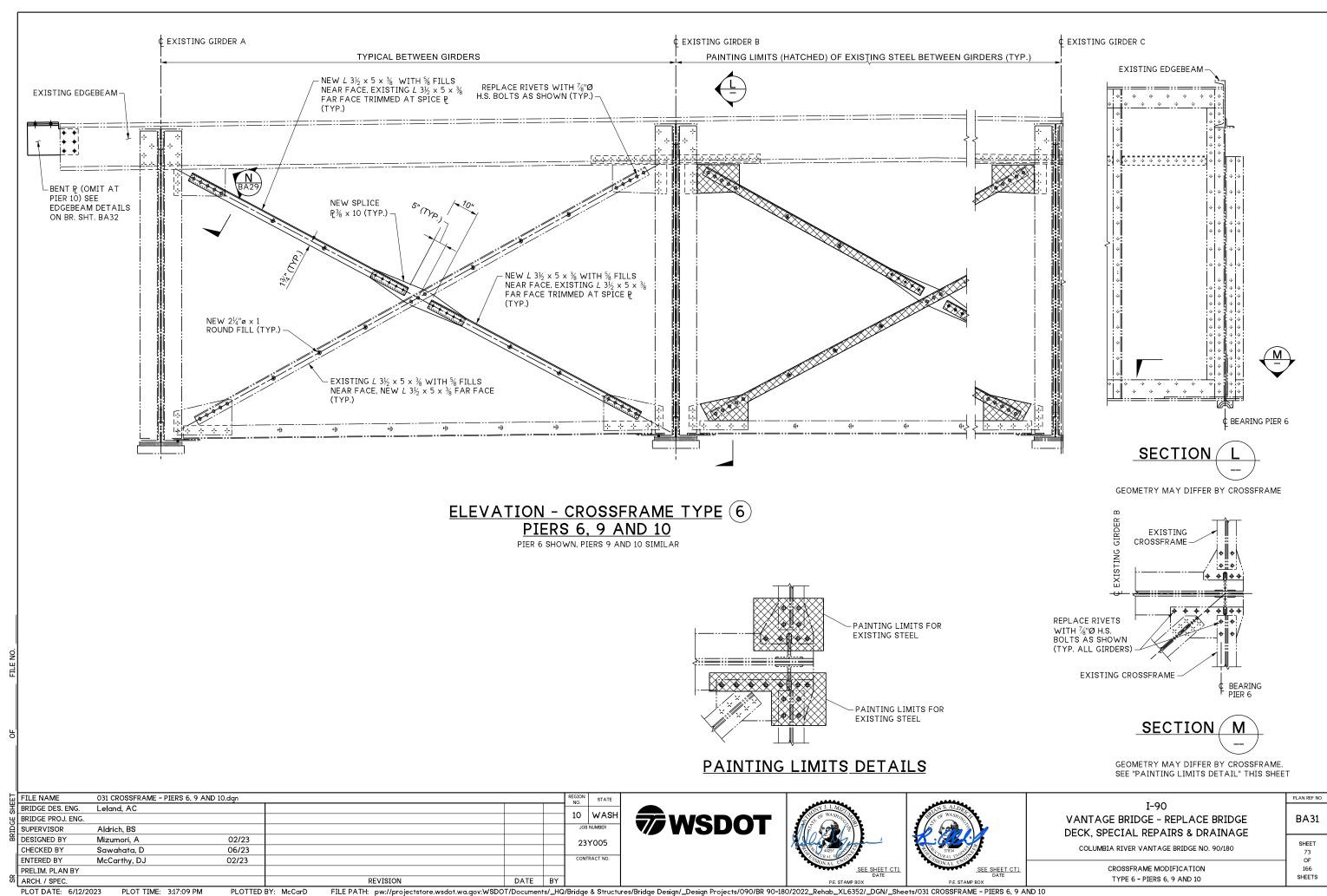
PLOT DATE: 6/12/2023 PLOT TIME: 3:10:48 PM PLOTTED BY: McCarD FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/026 CROSSFRAME PIER 1.dgn

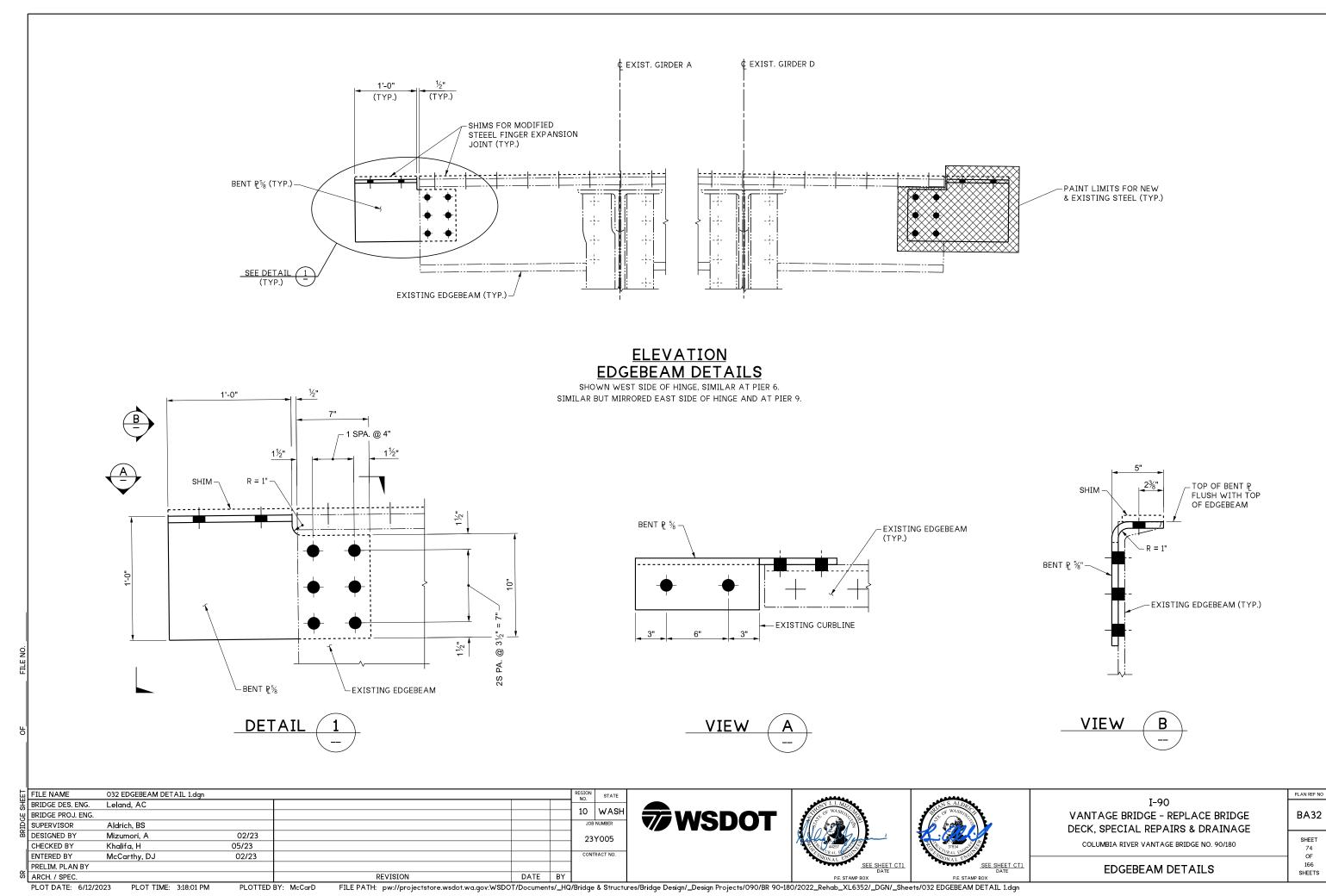


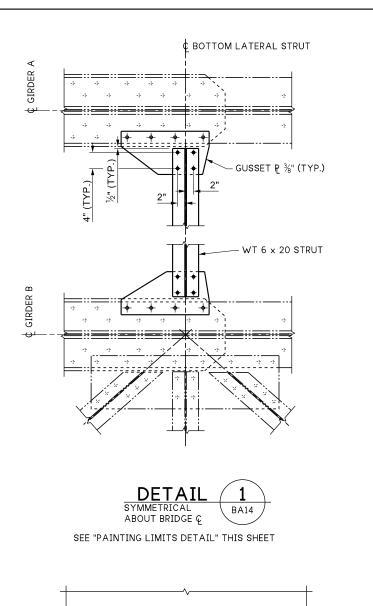


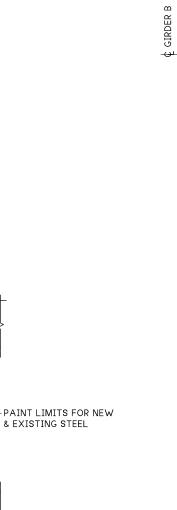


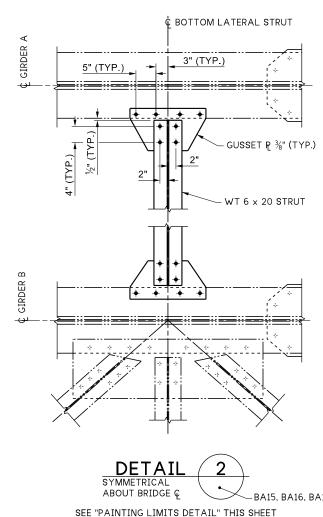


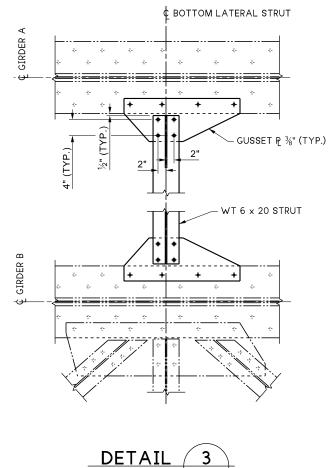












ABOUT BRIDGE Ç

SEE "PAINTING LIMITS DETAIL" THIS SHEET

FASTENER SYMBOLS

REQUIRED NUTS AND WASHERS NOT SHOWN

+ - H.S. BOLT (ORIENT HEAD AS SHOWN)

- H.S. BOLT (NEW OR MATCH EXIST. HOLE)

+ - H.S. BOLT (MATCH EXIST. HOLE)

+ - H.S. COUNTERSUNK BOLT (NEW OR MATCH EXIST. HOLE)

(♦) - H.S. COUNTERSUNK BOLT (MATCH EXIST. HOLE)

+ - H.S. COUNTERSUNK BOLT (MACHINE EXIST. COUNTERSUNK)

 $+\,$ - EXIST. RIVET OR BOLT

+ - EXIST. COUNTERSUNK RIVET OR BOLT

- HOLE (UNFILLED)

o - EXIST. HOLE (UNFILLED) 111

NOTES:

- 1. BOTTOM LATERAL STRUTS SHALL BE LOCATED AT EXISTING CROSSFRAMES, AND BE INSTALLED BETWEEN BOTTOM FLANGES OF EXISTING GIRDERS WITH THE WT STEM PROJECTING
- 2. BOLT HOLES IN GUSSET PLATE CONNECTIONS SHALL BE LOCATED AT EXISTING RIVET LOCATIONS. RIVETS SHALL BE REMOVED AS NEEDED. NEW HOLES MAY BE DRILLED WHERE EXISTING RIVETS ARE NOT PRESENT.

Į.										
山	FILE NAME	033 BOTTOM LATERA	L STRUT DETAIL 1.dgn				REGION NO.	STATE	_	
뿛	FILE NAME BRIDGE DES. ENG.	Leland, AC								
	BRIDGE PROJ. ENG.						10	WASH		
ĕ	SUPERVISOR DESIGNED BY	Aldrich, BS					JOB NUMBER			
8	DESIGNED BY	Mizumori, A	02/23				23Y005			
	CHECKED BY	Schultz, E	06/23							
	ENTERED BY	McCarthy, DJ	02/23				CONTRACT NO.			
	PRELIM. PLAN BY									
SR	ARCH. / SPEC.			REVISION	DATE	BY	l			

PAINTING LIMITS DETAIL

PLOTTED BY: McCarD

PLOT DATE: 6/12/2023 PLOT TIME: 3:19:36 PM







I-90 VANTAGE BRIDGE - REPLACE BRIDGE DECK, SPECIAL REPAIRS & DRAINAGE

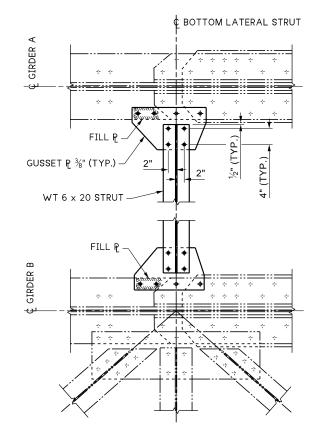
COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

BOTTOM LATERAL STRUTS DETAILS 1 OF 2

BA33

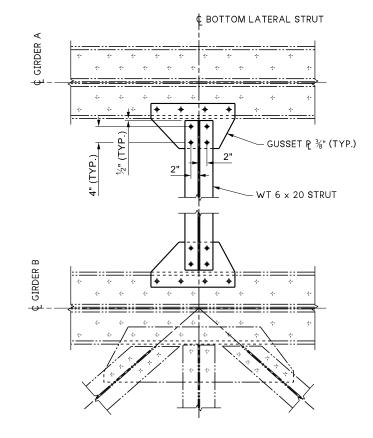
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DATE BY FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/033 BOTTOM LATERAL STRUT DETAIL 1.dgn



BA17 ABOUT BRIDGE ငု

SEE "PAINTING LIMITS DETAIL" ON BR. SHT. BA33



ABOUT BRIDGE Ç

SEE "PAINTING LIMITS DETAIL" ON BR. SHT. BA33

- 1										
ᇤ	FILE NAME	034 BOTTOM LATER	RAL STRUT DETAIL 2.dgn						REGION NO.	STATE
뿘	BRIDGE DES. ENG.	Leland, AC								
냸	BRIDGE PROJ. ENG.								10	WASH
ĕ	SUPERVISOR DESIGNED BY	Aldrich, BS							JOB	NUMBER
æ	DESIGNED BY	Mizumori, A	02/23						23	Y005
	CHECKED BY	Schultz, E	06/23]	1005
	ENTERED BY	McCarthy, DJ	02/23						CONT	RACT NO.
	PRELIM. PLAN BY									
SR	ARCH. / SPEC.					REVISION	DATE	BY		
	PLOT DATE: 6/12/20	D23 PLOT TIME:	3:20:31 PM PLOTTE	D BY:	McCarD	FILE PATH: pw://projectstore.wsdot.wa.gov:V	/SDOT/Documer	nts/_HG	/Bridge	& Structure







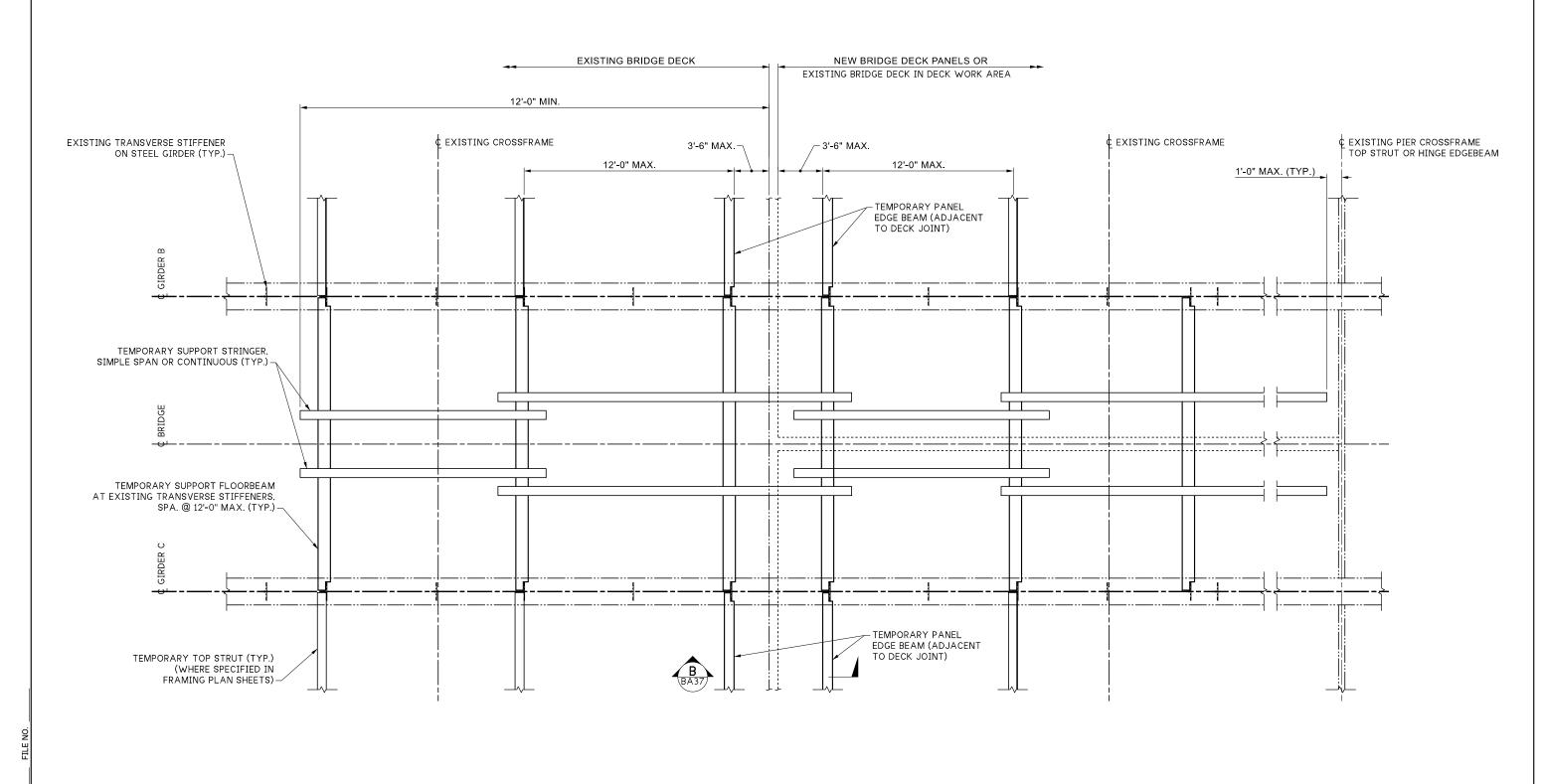
I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE
COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

PLAN REF NO

BA34

BOTTOM LATERAL STRUTS DETAILS 2 OF 2

PLOTTED BY: McCarD FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/034 BOTTOM LATERAL STRUT DETAIL 2.dgn



PARTIAL PLAN - TEMPORARY DECK SUPPORT

THE CONTRACTOR'S LAYOUT OF TEMPORARY DECK SUPPORT MEMBERS SHALL BE CONSISTENT WITH THEIR CONSTRUCTION SEQUENCE, BRIDGE DECK PANEL JOINT LAYOUT, AND FIELD MEASUREMENTS.

山	FILE NAME BRIDGE DES. ENG.	E NAME 035 TEMP DECK SUPPORT-APPR SPAN.dgn						STATE	:
뿛	BRIDGE DES. ENG.	Leland, AC					NO.		١.
щ	BRIDGE PROJ. ENG.						10	WASH	1
ĕ	SUPERVISOR DESIGNED BY	Aldrich, BS					JOB	NUMBER	١ '
æ	DESIGNED BY	Mizumori, A	02/23				23	Y005	
	CHECKED BY	O'Neill, P	05/23					1003	
	ENTERED BY	McCarthy, DJ	02/23				CONT	RACT NO.	
	PRELIM. PLAN BY								
ß	ARCH. / SPEC.			REVISION	DATE	BY			





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I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

TEMPORARY DECK SUPPORT

PLAN REF NO

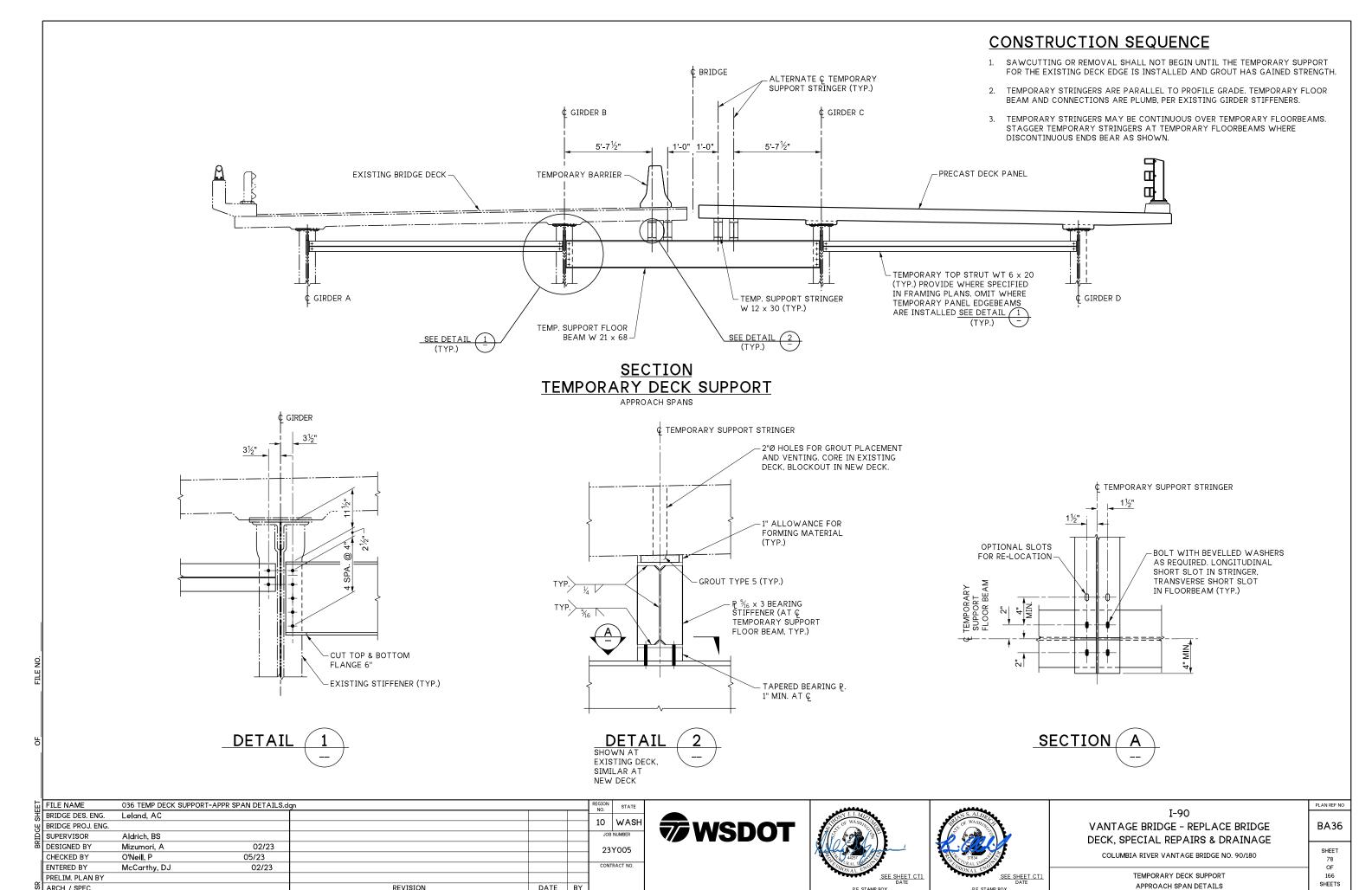
BA35

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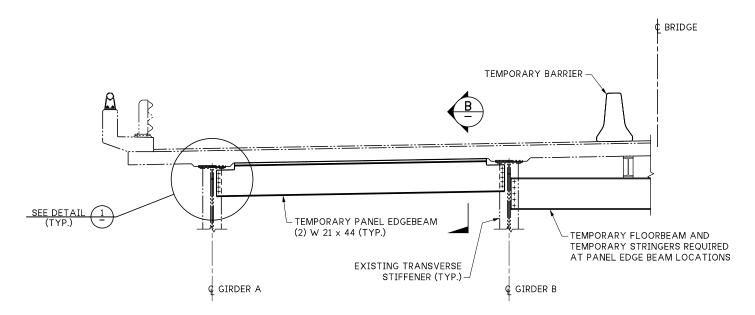
OF

APPROACH SPANS

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ARCH. / SPEC. REVISION DATE BY PLOT TIME: 3:24:30 PM PLOTTED BY: McCarD FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/036 TEMP DECK SUPPORT-APPR SPAN DETAILS.dgn

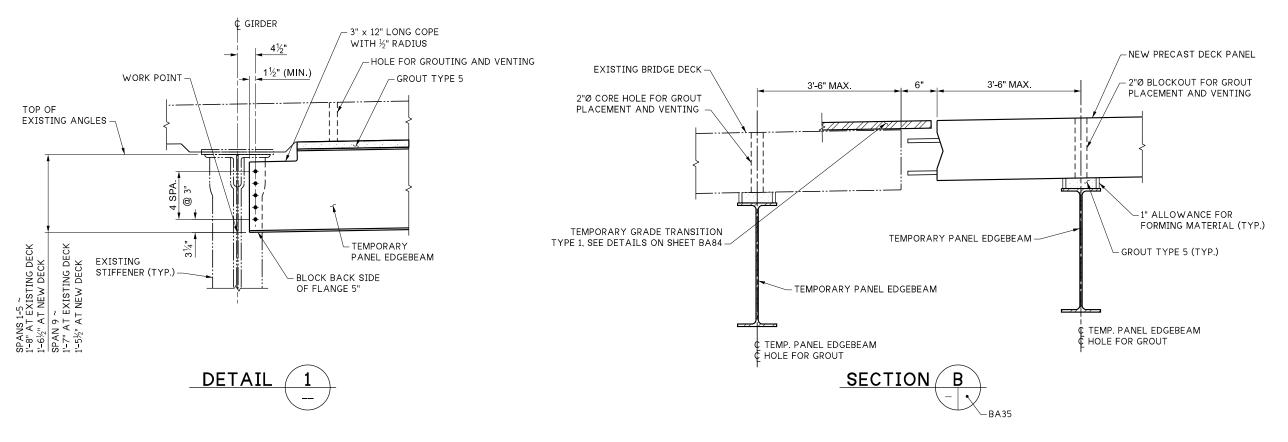


SECTION TEMPORARY PANEL EDGEBEAM

APPROACH SPANS

GENERAL NOTES:

- 1. TEMPORARY PANEL EDGEBEAMS SHALL BE INSTALLED IN PAIRS AS SHOWN AT LOCATIONS WHERE TRAFFIC CROSSES AN OPEN JOINT BETWEEN A NEW BRIDGE DECK PANEL AND THE EXISTING BRIDGE DECK. PANEL EDGEBEAMS ARE ONLY REQUIRED IN THE EXTERIOR GIRDER BAYS DIRECTLY UNDER
- 2. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF EXISTING TRANSVERSE STIFFENERS ON THE GIRDERS THAT SUPPORT TEMPORARY PANEL EDGEBEAMS. THE CONTRACTOR IS ADVISED THAT THE LAYOUT OF BRIDGE DECK PANEL JOINTS IS CONSTRAINED BY THE LOCATION OF EXISTING TRANSVERSE STIFFENERS.
- 3. GROUT IN PANEL EDGEBEAM HAUNCHES SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI PRIOR TO SUPPORTING TRAFFIC. ALTERNATE HAUNCH MATERIALS AND DETAILS REQUIRE
- 4. PANEL EDGEBEAMS MAY BE USED TO SUPPORT CONSTRUCTION LOAD IF VALIDATED BY A TYPE 2E WORKING DRAWING. THE CONTRACTOR IS ADVISED THAT UNSUPPORTED TRANSVERSE DECK EDGES HAVE A REDUCED LOAD CARRYING CAPACITY.
- 5. TEMPORARY PANEL EDGEBEAMS AND THEIR HAUNCHES SHALL BE REMOVED IN THEIR ENTIRETY.



FILE NAME 037 TEMP DECK SUPPORT-APPR SPAN-EDGEBEAM.dgn BRIDGE DES. ENG. Leland, AC 10 WASH BRIDGE PROJ. ENG. JOB NUMBER SUPERVISOR Aldrich BS DESIGNED BY 02/23 23Y005 CHECKED BY O'Neill, P 05/23 CONTRACT NO ENTERED BY McCarthy, DJ 02/23 PRELIM. PLAN BY G ARCH. / SPEC. REVISION DATE BY







I-90 VANTAGE BRIDGE - REPLACE BRIDGE DECK, SPECIAL REPAIRS & DRAINAGE

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180 TEMPORARY DECK SUPPORT

PLAN REF NO

BA37

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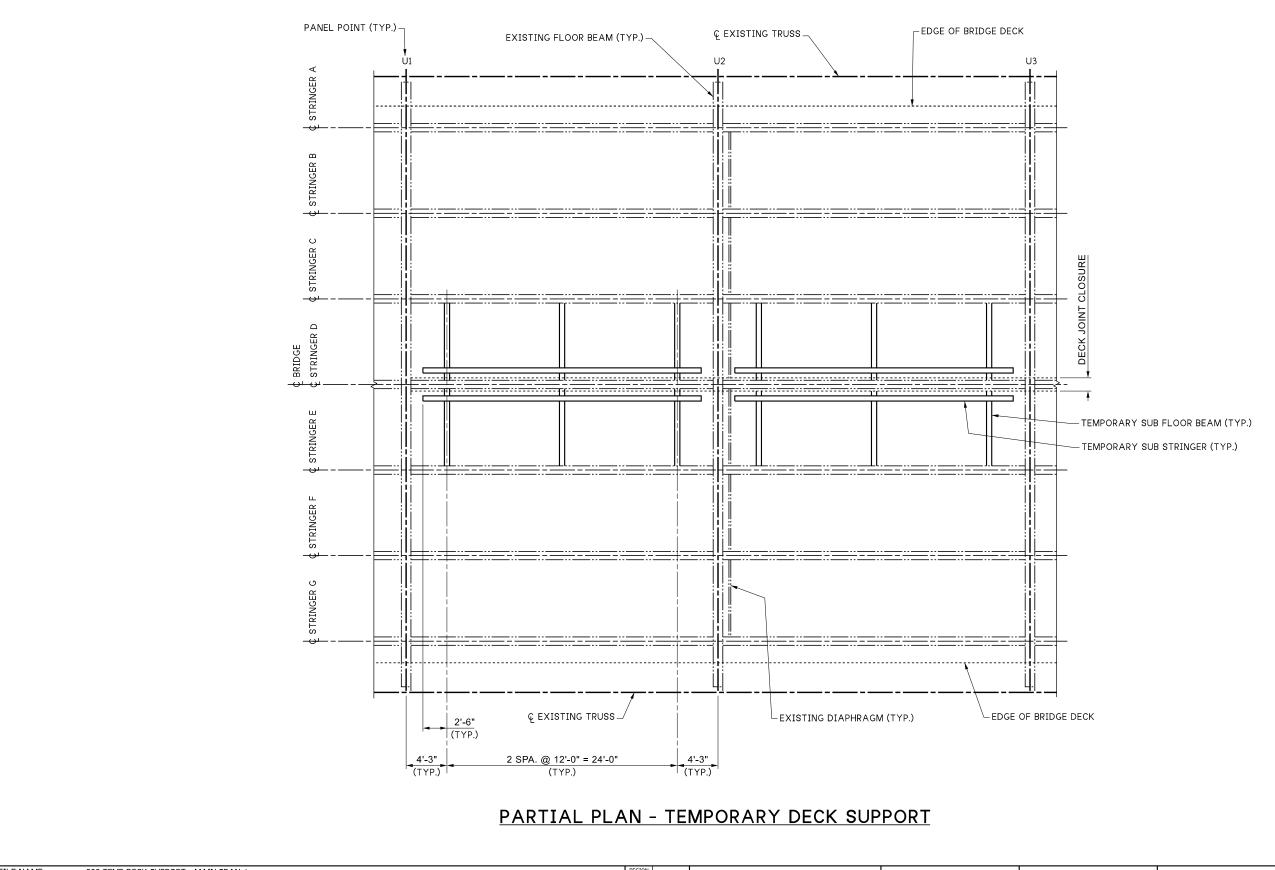
OF

APPROACH SPAN PANEL EDGEBEAMS

PLOT DATE: 6/12/2023 PLOT TIME: 3:25:10 PM

PLOTTED BY: McCarD

FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/037 TEMP DECK SUPPORT-APPR SPAN-EDGEBEAM



닖	FILE NAME	038 TEMP DECK SUF	PPORT - MAIN SPAN.dgn				REGION NO.	STATE	i
뿘	FILE NAME BRIDGE DES. ENG.	Leland, AC							Ι.
뇄	BRIDGE PROJ. ENG.						10	WASH	
ĕ	BRIDGE PROJ. ENG. SUPERVISOR DESIGNED BY	Aldrich, BS					JOB	NUMBER	'
器	DESIGNED BY	Mizumori, A	02/23				23	Y005	ĺ
	CHECKED BY	O'Neill, P	05/23] -	1003	ĺ
	ENTERED BY	McCarthy, DJ	02/23				CONT	RACT NO.	ĺ
	PRELIM. PLAN BY								ĺ
쏬	ARCH. / SPEC.			REVISION	DATE	BY	1		ĺ





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SEE SHEET CT1 DATE	

I-90 VANTAGE BRIDGE - REPLACE BRIDGE DECK, SPECIAL REPAIRS & DRAINAGE

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

TEMPORARY DECK SUPPORT MAIN SPANS

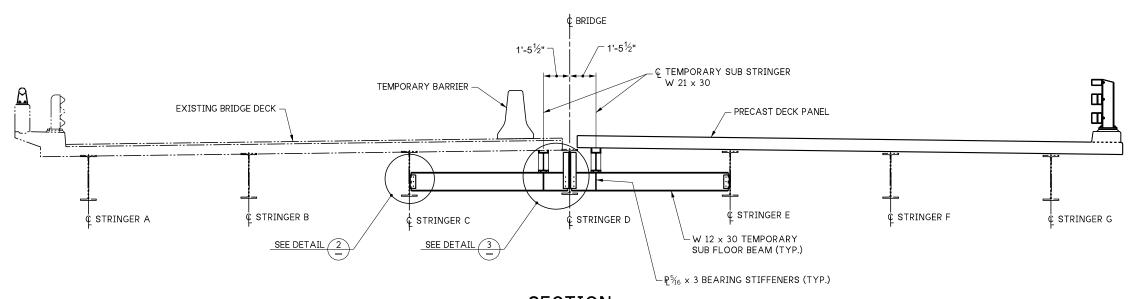
BA38

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PLOT DATE: 6/12/2023 PLOT TIME: 3:25:58 PM

PLOTTED BY: McCarD

FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/038 TEMP DECK SUPPORT - MAIN SPAN

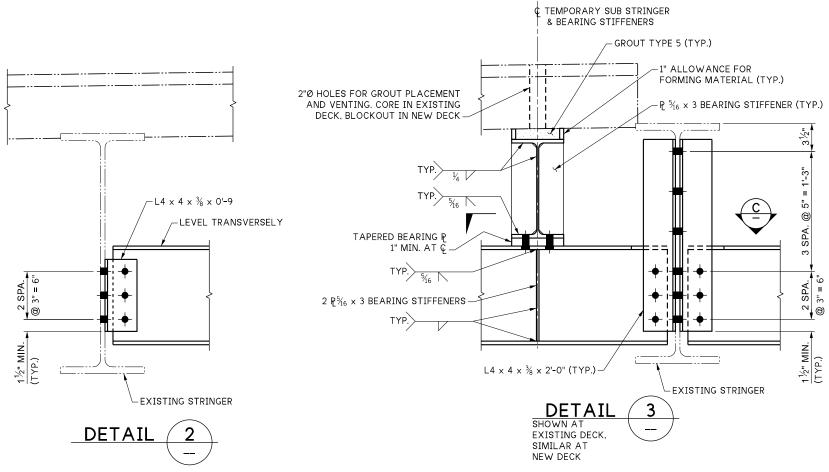


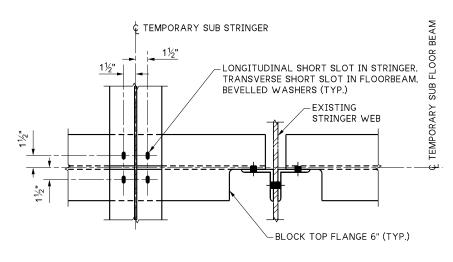
SECTION TEMPORARY DECK SUPPORT

MAIN SPAN

CONSTRUCTION SEQUENCE

 SAWCUTTING OR REMOVAL ABOVE STRINGER D SHALL NOT BEGIN UNTIL THE TEMPORARY SUPPORT FOR THE EXISTING DECK EDGE IS INSTALLED AND GROUT HAS GAINED STRENGTH.





SECTION C

ᇤ	FILE NAME	039 TEMP DECK SUPP	ORT - MAIN SPAN DETAILS.	dgn			REGION NO.	STATE	П
뿛	BRIDGE DES. ENG.	Leland, AC) . (A OL I	i
ij	BRIDGE PROJ. ENG.						10	WASH	i
ĕ	SUPERVISOR DESIGNED BY	Aldrich, BS					JOB NUMBER 23Y005		i
8	DESIGNED BY	Mizumori, A	02/23						İ
	CHECKED BY	O'Neill, P	05/23					1005	i
	ENTERED BY	McCarthy, DJ	02/23				CONT	RACT NO.	i
	PRELIM. PLAN BY								i
SR	ARCH. / SPEC.			REVISION	DATE	BY			





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	DATE	

I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

PLAN REF NO

BA39

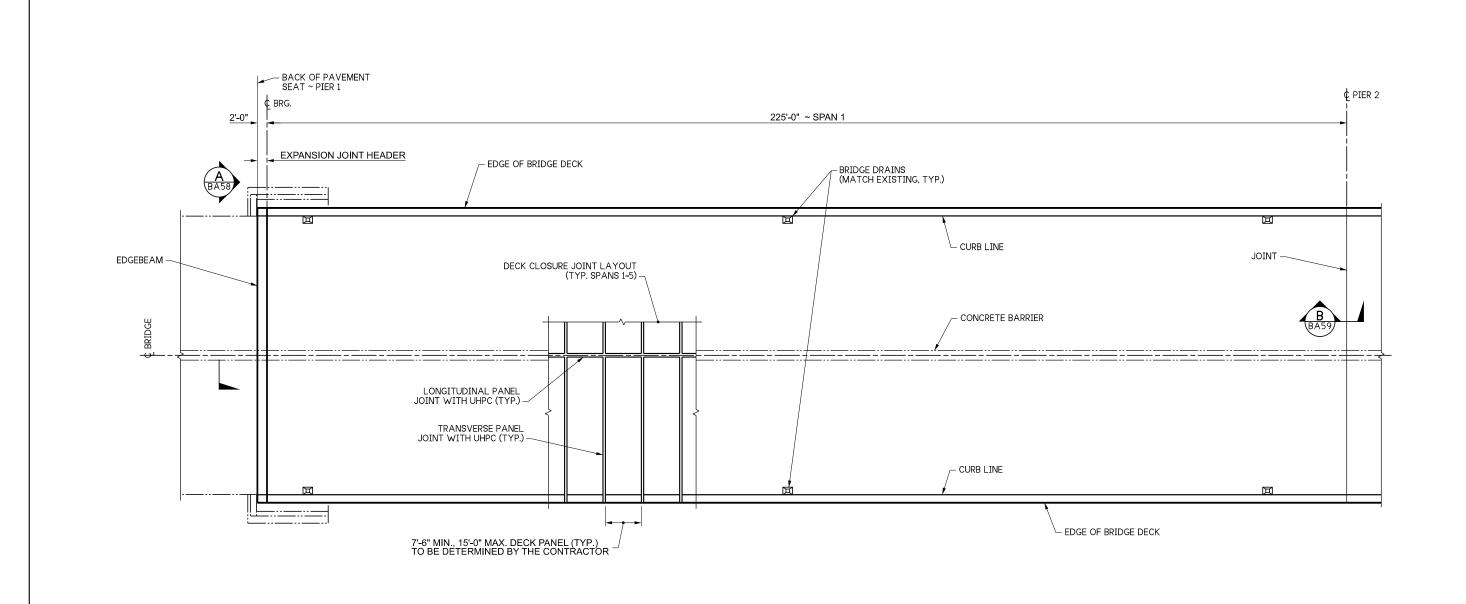
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OF

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

TEMPORARY DECK SUPPORT
MAIN SPAN DETAILS

ARCH. / SPEC. REVISION DATE BY PLOT TIME: 3:26:52 PM PLOTTED BY: McCarD FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/039 TEMP DECK SUPPORT - MAIN SPAN DETAILS.dgn



BRIDGE DECK PLAN DETAILS 1 OF 11

FILE NAME
BRIDGE DES 040 SLAB PLAN 01.dgn BRIDGE DES. ENG. Leland, AC 10 WASH BRIDGE PROJ. ENG. JOB NUMBER SUPERVISOR Aldrich, BS 02/23 DESIGNED BY 23Y005 CHECKED BY O'Neill, P 05/23 ENTERED BY McCarthy, DJ 02/23 PRELIM. PLAN BY ARCH. / SPEC.

PLOT DATE: 6/12/2023 PLOT TIME: 3:27:40 PM







I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE
COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

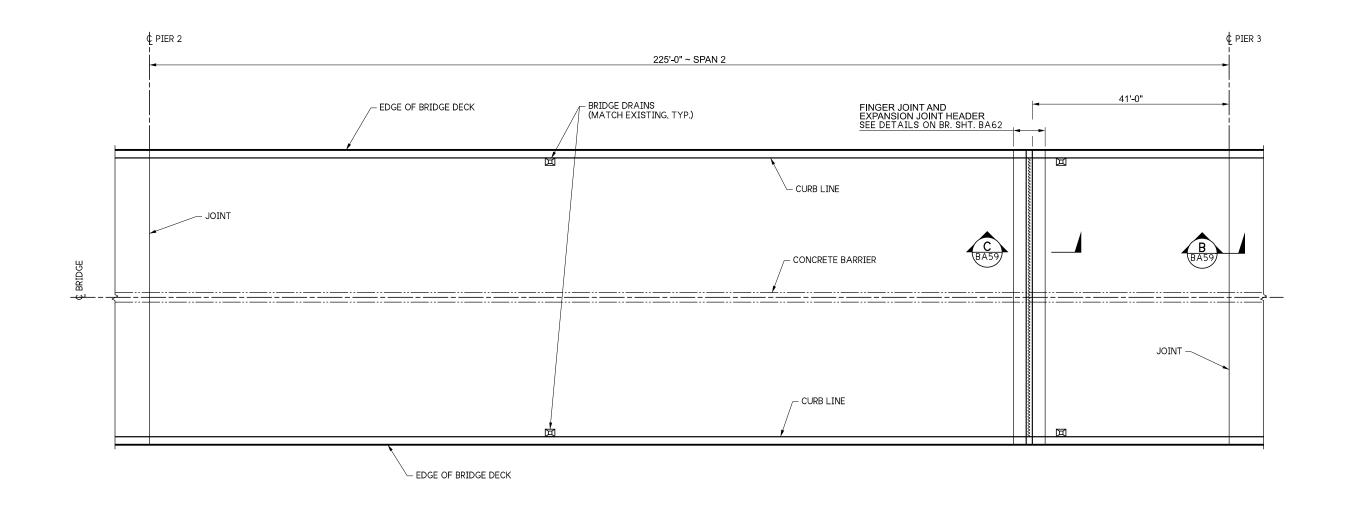
PLAN REF NO

BA40

SHEET

BRIDGE DECK PLAN DETAILS 1 OF 11

PLOTTED BY: McCarD FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/040 SLAB PLAN 01.dgn



BRIDGE DECK PLAN DETAILS 2 OF 11

FILE NAME
BRIDGE DES. ENG. 041 SLAB PLAN 02.dgn Leland, AC 10 WASH BRIDGE PROJ. ENG. JOB NUMBER SUPERVISOR Aldrich, BS 02/23 B DESIGNED BY 23Y005 CHECKED BY O'Neill, P 05/23 ENTERED BY McCarthy, DJ 02/23 PRELIM. PLAN BY ARCH. / SPEC. REVISION DATE BY







I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE
COLUMBIA DIVED VANTACE DDIDCE NO 00/190

PLAN REF NO

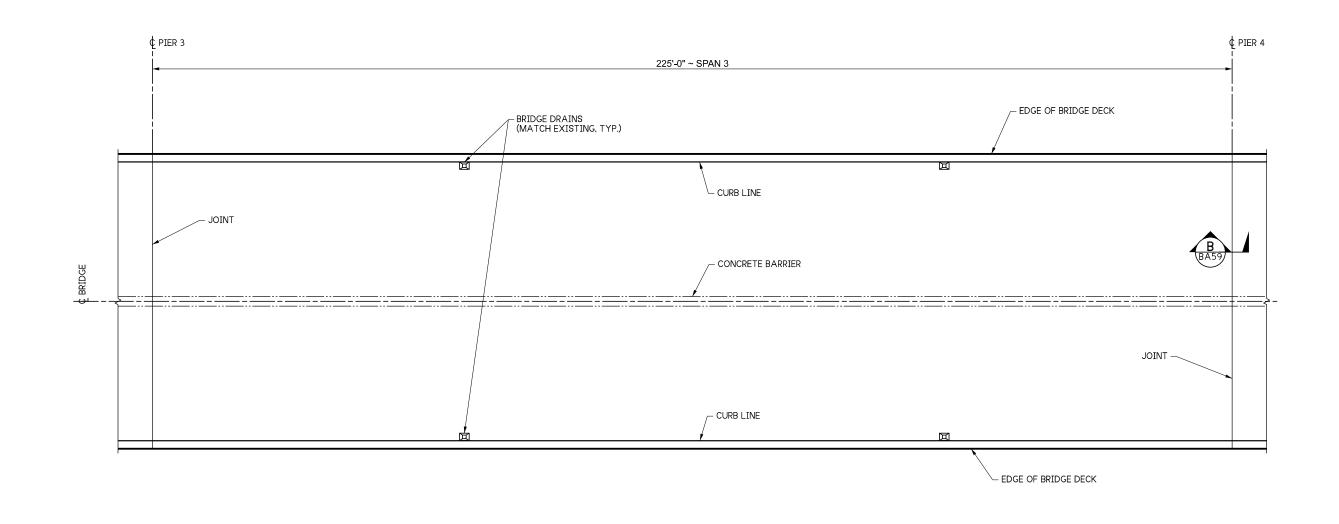
BA41

SHEET

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

BRIDGE DECK PLAN DETAILS 2 OF 11

PLOT DATE: 6/13/2023 PLOT TIME: 9:13:23 AM PLOTTED BY: McCarD FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/041 SLAB PLAN 02.dgn



BRIDGE DECK PLAN DETAILS 3 OF 11

FILE NAME
BRIDGE DES. ENG. 042 SLAB PLAN 03.dgn Leland, AC 10 WASH BRIDGE PROJ. ENG. JOB NUMBER SUPERVISOR Aldrich, BS 02/23 B DESIGNED BY 23Y005 CHECKED BY O'Neill, P 05/23 ENTERED BY McCarthy, DJ 02/23 PRELIM. PLAN BY ARCH. / SPEC. REVISION DATE BY







	I-90
VANTAGE BRIDG	GE - REPLACE BRIDGE
DECK, SPECIAL F	REPAIRS & DRAINAGE
COLUMNIA DI A DIVER V	***********************

PLAN REF NO

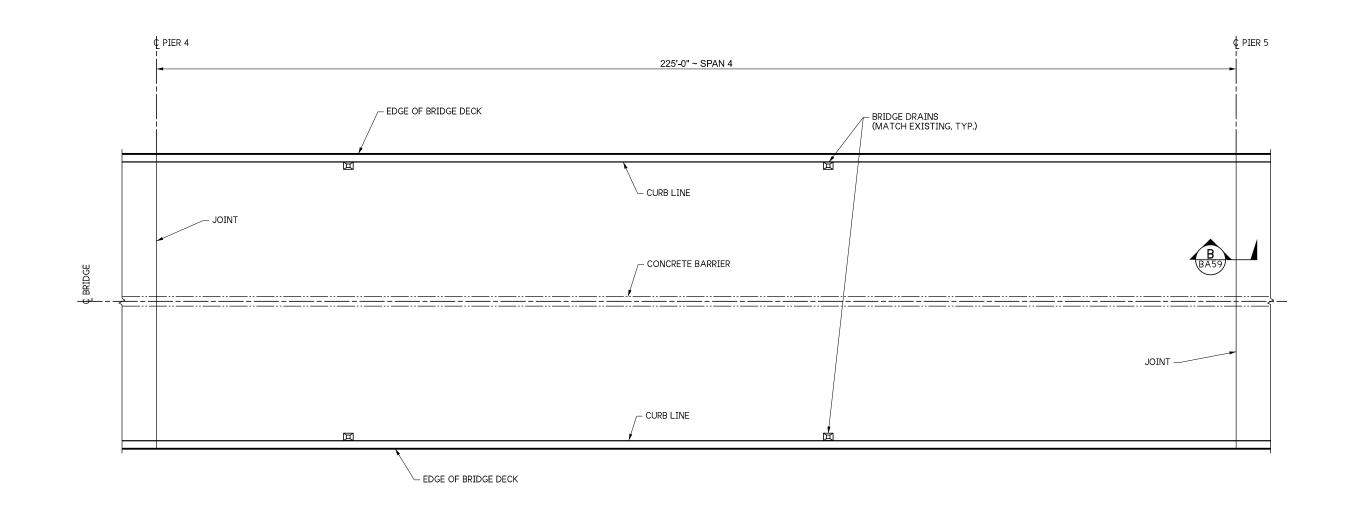
BA42

SHEET

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

BRIDGE DECK PLAN DETAILS 3 OF 11

PLOT DATE: 6/12/2023 PLOT TIME: 3:29:21 PM PLOTTED BY: McCarD FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/042 SLAB PLAN 03.dgn



BRIDGE DECK PLAN DETAILS 4 OF 11

FILE NAME
BRIDGE DES. ENG. 043 SLAB PLAN 04.dgn Leland, AC 10 WASH BRIDGE PROJ. ENG. JOB NUMBER SUPERVISOR Aldrich, BS 02/23 B DESIGNED BY 23Y005 CHECKED BY O'Neill, P 05/23 ENTERED BY McCarthy, DJ 02/23 PRELIM. PLAN BY ARCH. / SPEC. REVISION DATE BY







	I-90
	VANTAGE BRIDGE - REPLACE BRIDGE
I	DECK, SPECIAL REPAIRS & DRAINAGE
	COLLIMBIA DIVED VANTAGE BRIDGE NO. 90/180

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

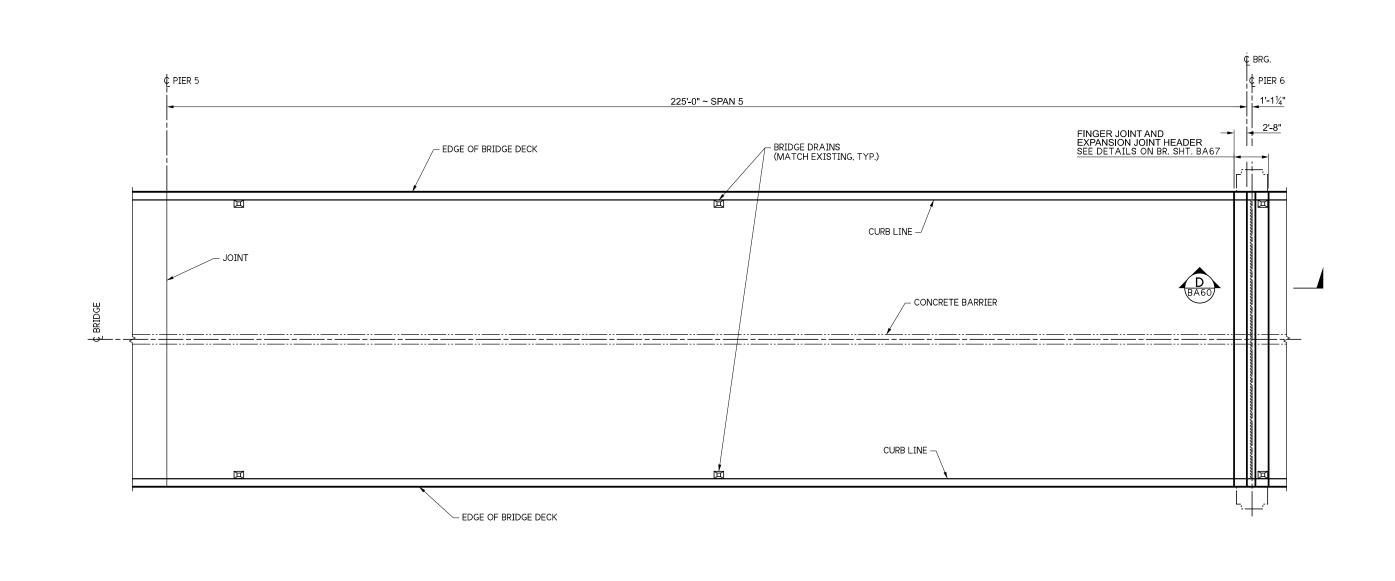
PLAN REF NO

BA43

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BRIDGE DECK PLAN DETAILS 4 OF 11

PLOT DATE: 6/12/2023 PLOT TIME: 3:30:14 PM PLOTTED BY: McCarD FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/043 SLAB PLAN 04.dgn



BRIDGE DECK PLAN DETAILS 5 OF 11

FILE NAME
BRIDGE DES. 044 SLAB PLAN 05.dgn BRIDGE DES. ENG. Leland, AC 10 WASH BRIDGE PROJ. ENG. JOB NUMBER SUPERVISOR Aldrich, BS 02/23 DESIGNED BY 23Y005 CHECKED BY O'Neill, P 05/23 CONTRACT NO. ENTERED BY McCarthy, DJ 02/23 PRELIM. PLAN BY ARCH. / SPEC.







I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE
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PLAN REF NO

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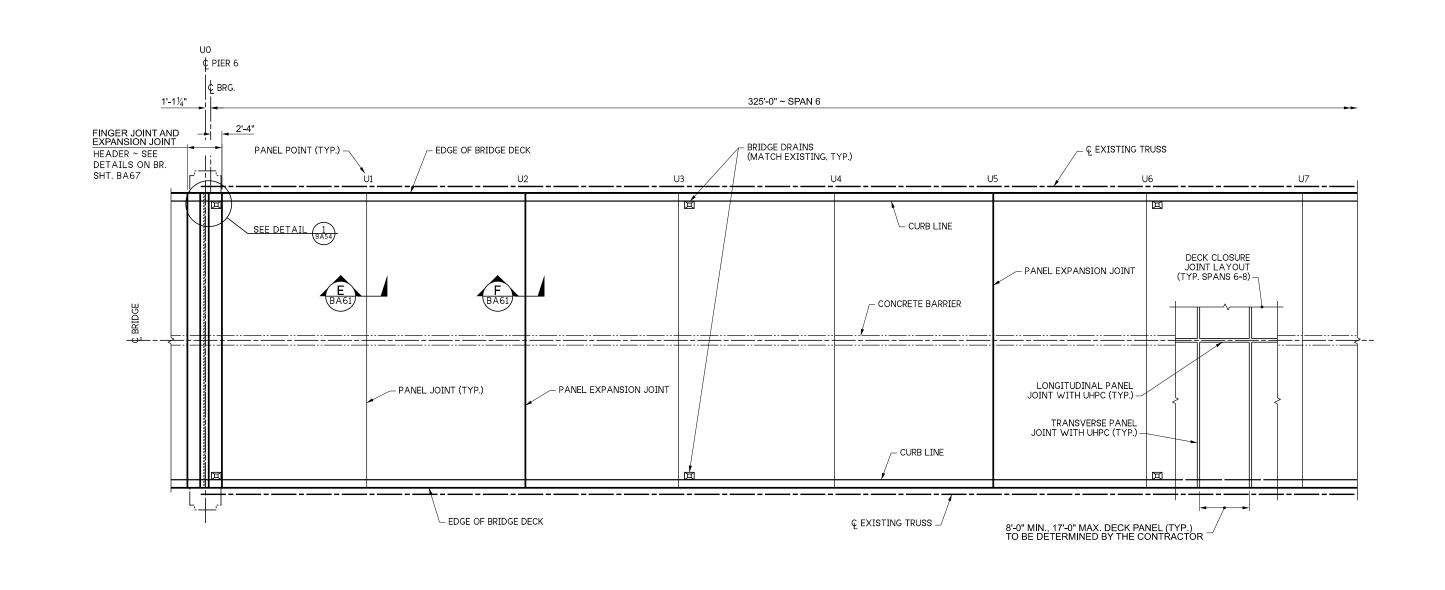
COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

BRIDGE DECK PLAN DETAILS 5 OF 11

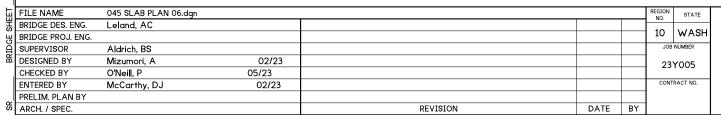
PLOT DATE: 6/13/2023 PLOT TIME: 7:22:53 AM

PLOTTED BY: McCarD

FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/044 SLAB PLAN 05.dgn



BRIDGE DECK PLAN DETAILS 6 OF 11









I-90 VANTAGE BRIDGE - REPLACE BRIDGE DECK, SPECIAL REPAIRS & DRAINAGE PLAN REF NO

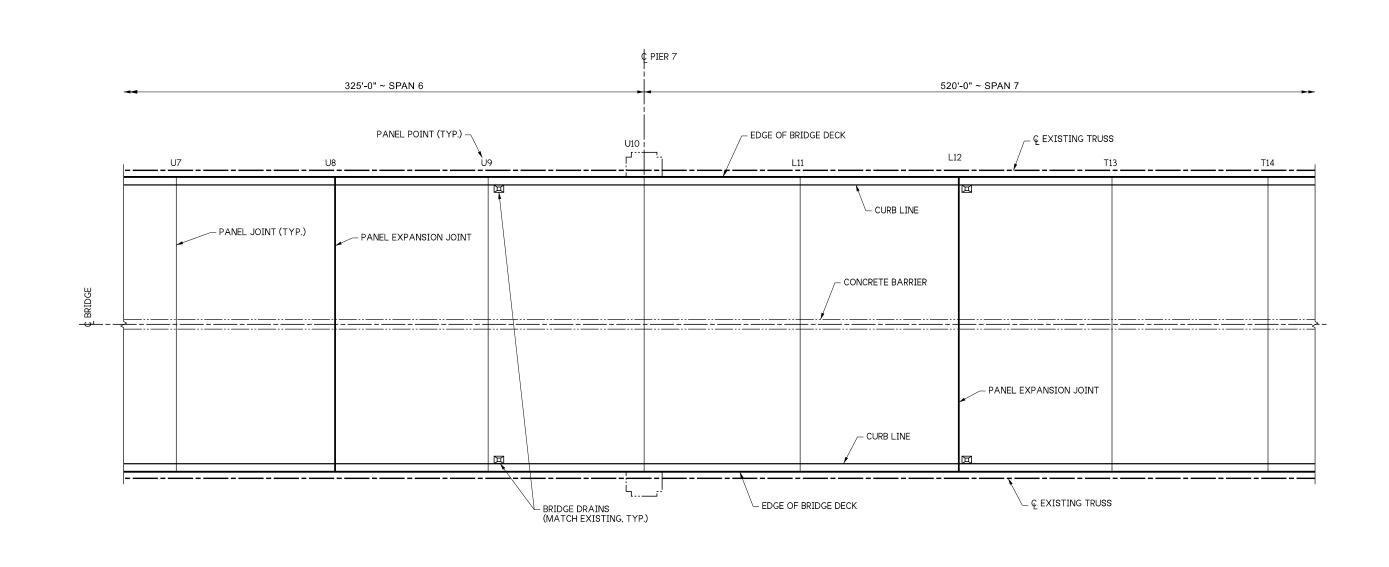
BA45

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COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

BRIDGE DECK PLAN DETAILS 6 OF 11

PLOT DATE: 6/13/2023 PLOT TIME: 9:15:48 AM PLOTTED BY: McCarD FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/045 SLAB PLAN 06.dgn



BRIDGE DECK PLAN DETAILS 7 OF 11

FILE NAME
BRIDGE DES. 046 SLAB PLAN 07.dgn BRIDGE DES. ENG. Leland, AC 10 WASH BRIDGE PROJ. ENG. SUPERVISOR Aldrich, BS 02/23 DESIGNED BY 23Y005 CHECKED BY O'Neill, P 05/23 ENTERED BY McCarthy, DJ 02/23 PRELIM. PLAN BY ARCH. / SPEC. REVISION DATE BY







I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE
COLUMBIA DIVED VANTACE DDIDCE NO 00/190

PLAN REF NO

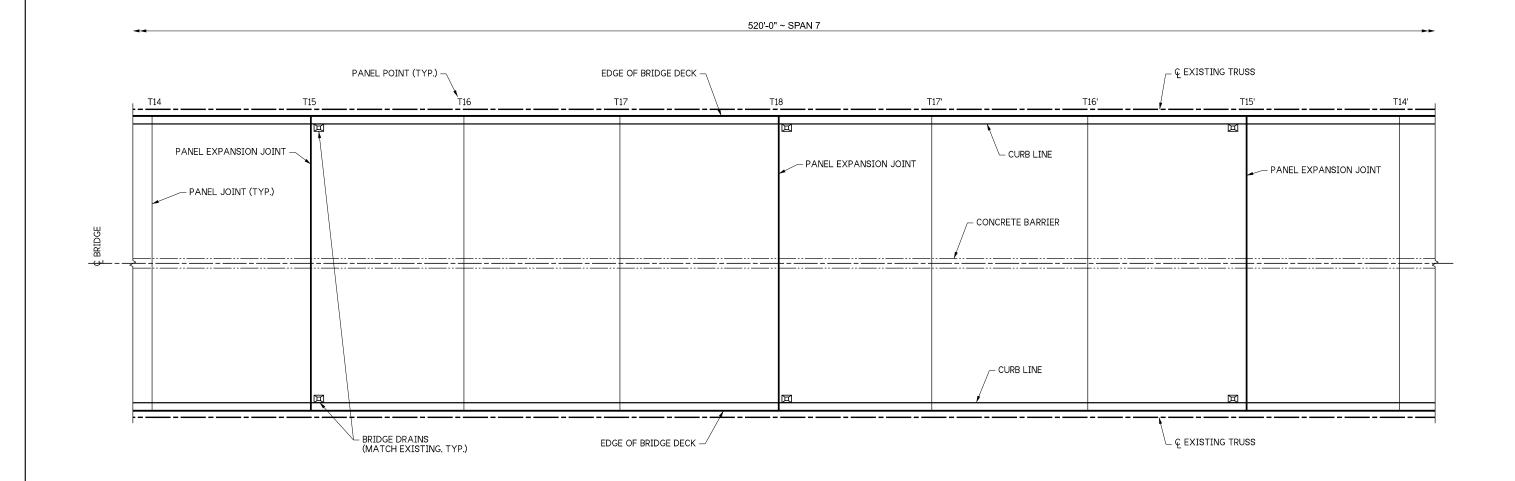
BA46

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COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

BRIDGE DECK PLAN DETAILS 7 OF 11

PLOT DATE: 6/12/2023 PLOT TIME: 3:32:26 PM PLOTTED BY: McCarD FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/046 SLAB PLAN 07.dgn



BRIDGE DECK PLAN DETAILS 8 OF 11

FILE NAME
BRIDGE DES. 047 SLAB PLAN 08.dgn BRIDGE DES. ENG. Leland, AC 10 WASH BRIDGE PROJ. ENG. SUPERVISOR Aldrich, BS 02/23 DESIGNED BY 23Y005 CHECKED BY O'Neill, P 05/23 ENTERED BY McCarthy, DJ 02/23 PRELIM. PLAN BY ARCH. / SPEC. REVISION DATE BY







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VANTAGE BRID	GE - REPLACE BRIDGE
DECK, SPECIAL	REPAIRS & DRAINAGE
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PLAN REF NO

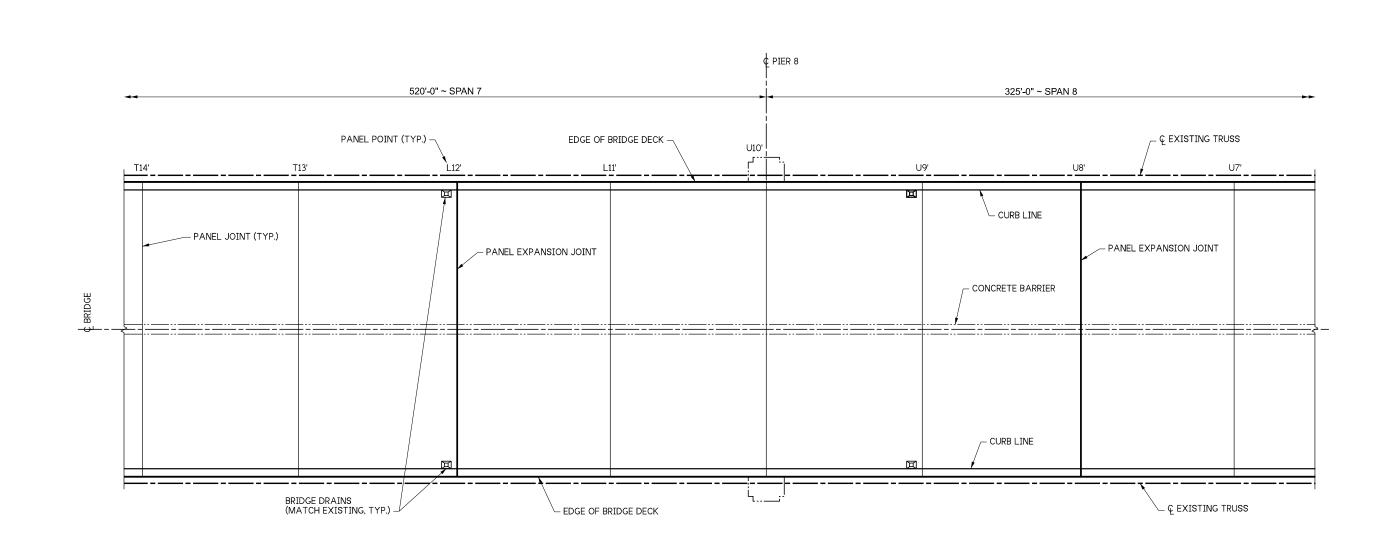
BA47

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COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

BRIDGE DECK PLAN DETAILS 8 OF 11

PLOTTED BY: WrennMa FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/047 SLAB PLAN 08.dgn PLOT DATE: 6/12/2023 PLOT TIME: 3:34:29 PM



BRIDGE DECK PLAN DETAILS 9 OF 11

FILE NAME
BRIDGE DES. 048 SLAB PLAN 09.dgn BRIDGE DES. ENG. 10 WASH BRIDGE PROJ. ENG. SUPERVISOR Aldrich, BS 02/23 DESIGNED BY 23Y005 CHECKED BY O'Neill, P 05/23 ENTERED BY McCarthy, DJ 02/23 PRELIM. PLAN BY ARCH. / SPEC.







I-90 VANTAGE BRIDGE - REPLACE BRIDGE DECK, SPECIAL REPAIRS & DRAINAGE PLAN REF NO

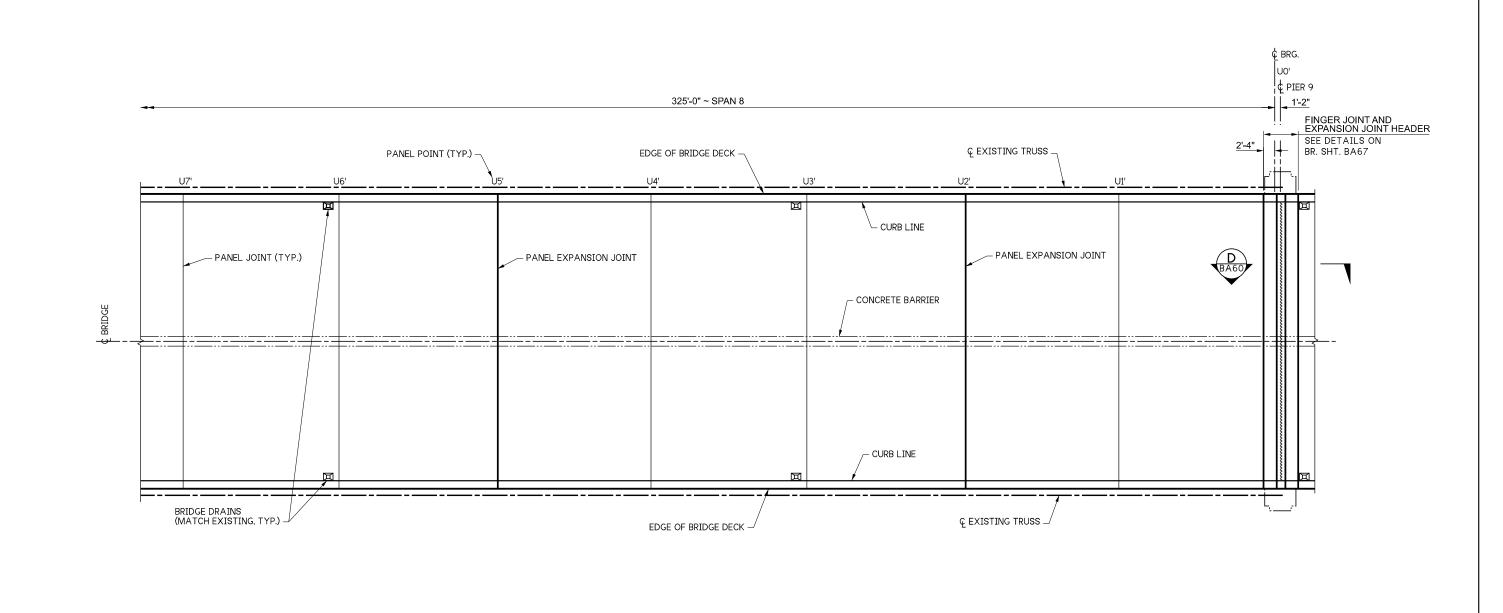
BA48

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COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

BRIDGE DECK PLAN DETAILS 9 OF 11

PLOT DATE: 6/12/2023 PLOT TIME: 3:33:42 PM PLOTTED BY: WrennMa FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/048 SLAB PLAN 09.dgn



BRIDGE DECK PLAN DETAILS 10 OF 11

FILE NAME
BRIDGE DES. 049 SLAB PLAN 10.dgn BRIDGE DES. ENG. Leland, AC 10 WASH BRIDGE PROJ. ENG. JOB NUMBER SUPERVISOR Aldrich, BS 02/23 DESIGNED BY 23Y005 CHECKED BY O'Neill, P 05/23 ENTERED BY McCarthy, DJ 02/23 PRELIM. PLAN BY ARCH. / SPEC. REVISION DATE BY







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VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE
COLLINDIA DIVED VANTACE DDIDCE NO 00/100

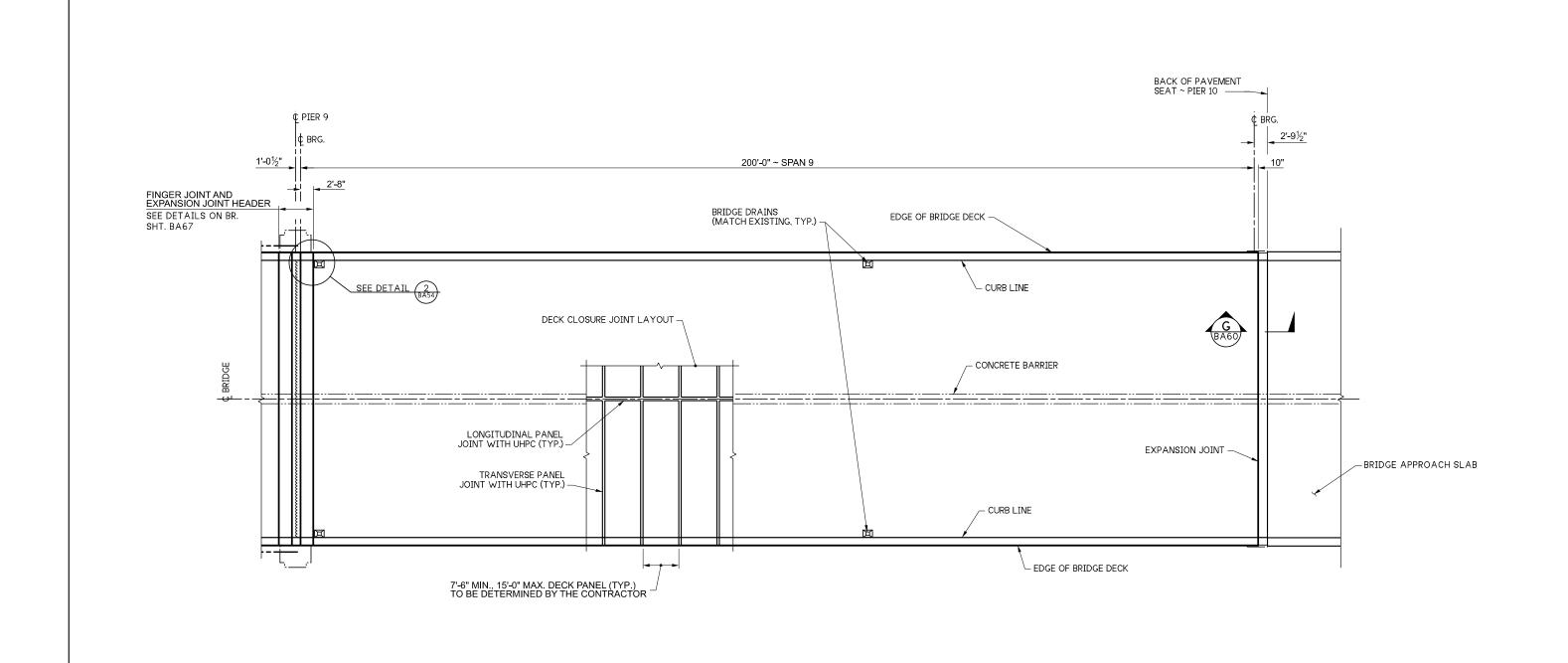
COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

BRIDGE DECK PLAN DETAILS 10 OF 11

PLOT DATE: 6/13/2023 PLOT TIME: 9:18:06 AM PLOTTED BY: McCarD FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/049 SLAB PLAN 10.dgn SHEET

PLAN REF NO

BA49



BRIDGE DECK PLAN DETAILS 11 OF 11

FILE NAME
BRIDGE DES 050 SLAB PLAN 11.dgn BRIDGE DES. ENG. Leland, AC 10 WASH BRIDGE PROJ. ENG. JOB NUMBER SUPERVISOR Aldrich, BS 02/23 DESIGNED BY 23Y005 CHECKED BY O'Neill, P 05/23 ENTERED BY McCarthy, DJ 02/23 PRELIM. PLAN BY ARCH. / SPEC.







I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

PLAN REF NO

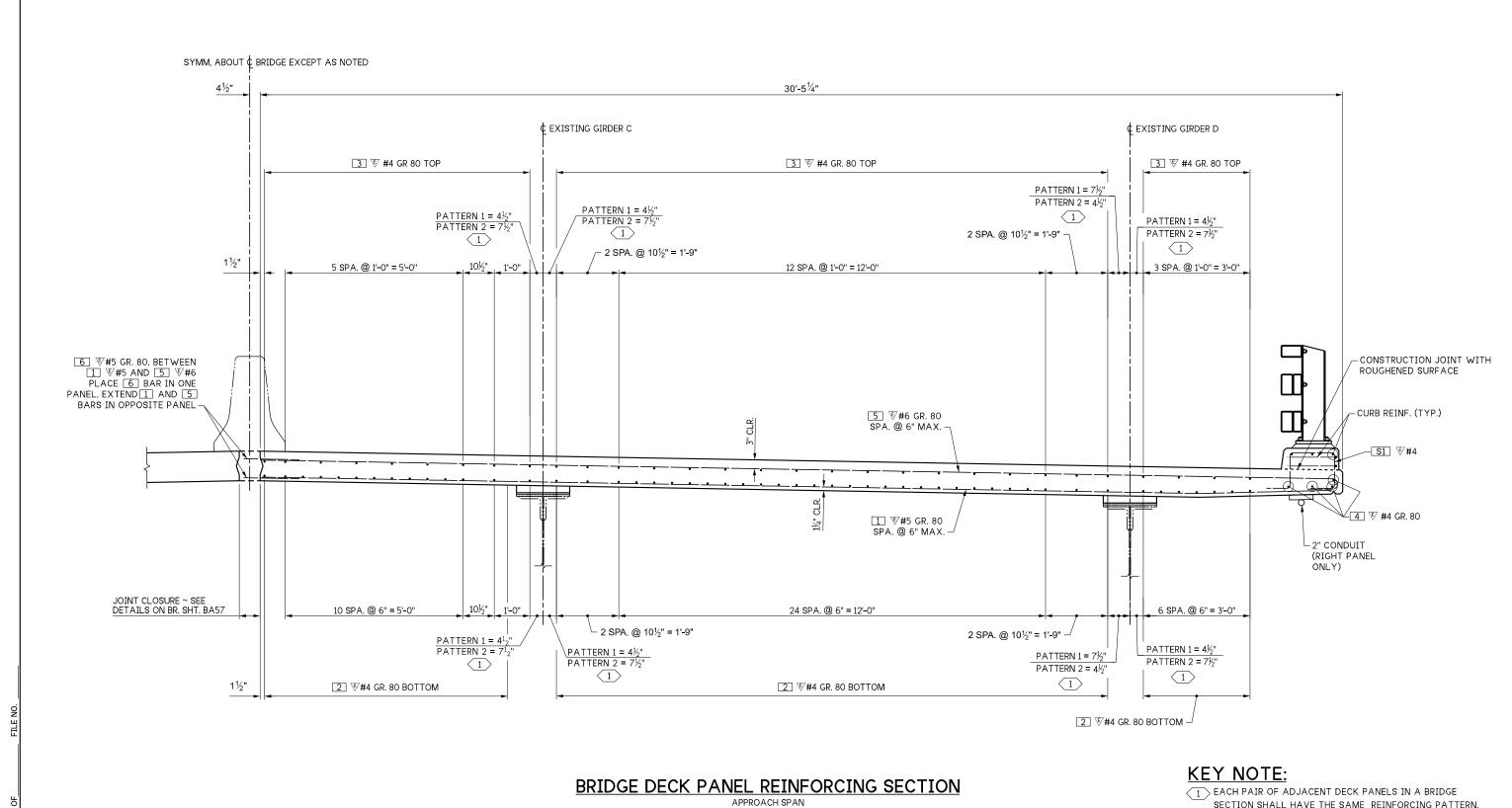
BA50

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COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

BRIDGE DECK PLAN DETAILS 11 OF 11

PLOT DATE: 6/13/2023 PLOT TIME: 9:19:47 AM PLOTTED BY: McCarD FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/050 SLAB PLAN 11.dgn



EACH PAIR OF ADJACENT DECK PANELS IN A BRIDGE
 SECTION SHALL HAVE THE SAME REINFORCING PATTERN.
 DECK PANEL REINFORCING SHALL ALTERNATE BETWEEN
 PATTERN 1 AND PATTERN 2 FOR DECK PANELS JOINED
 WITH A TRANSVERSE PANEL JOINT CLOSURE USING UHPC.

PLAN REF NO

BA51

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OF

Щ	FILE NAME BRIDGE DES. ENG.	051 DECK REINF SECT 01.dgn					REGION NO.	STATE	
뿛	BRIDGE DES. ENG.	Leland, AC							1.
끯	BRIDGE PROJ. ENG.						10	WASH	1
ĕ	BRIDGE PROJ. ENG. SUPERVISOR DESIGNED BY	Aldrich, BS					JOB	NUMBER	· '
쁊	DESIGNED BY	Mizumori, A	02/23				23	Y005	
	CHECKED BY	O'Neill, P	05/23]	1005	
	ENTERED BY	McCarthy, DJ	02/23				CONT	RACT NO.	
	PRELIM. PLAN BY								
器	ADCH / SDEC			PEVISION	DATE	RY	1		





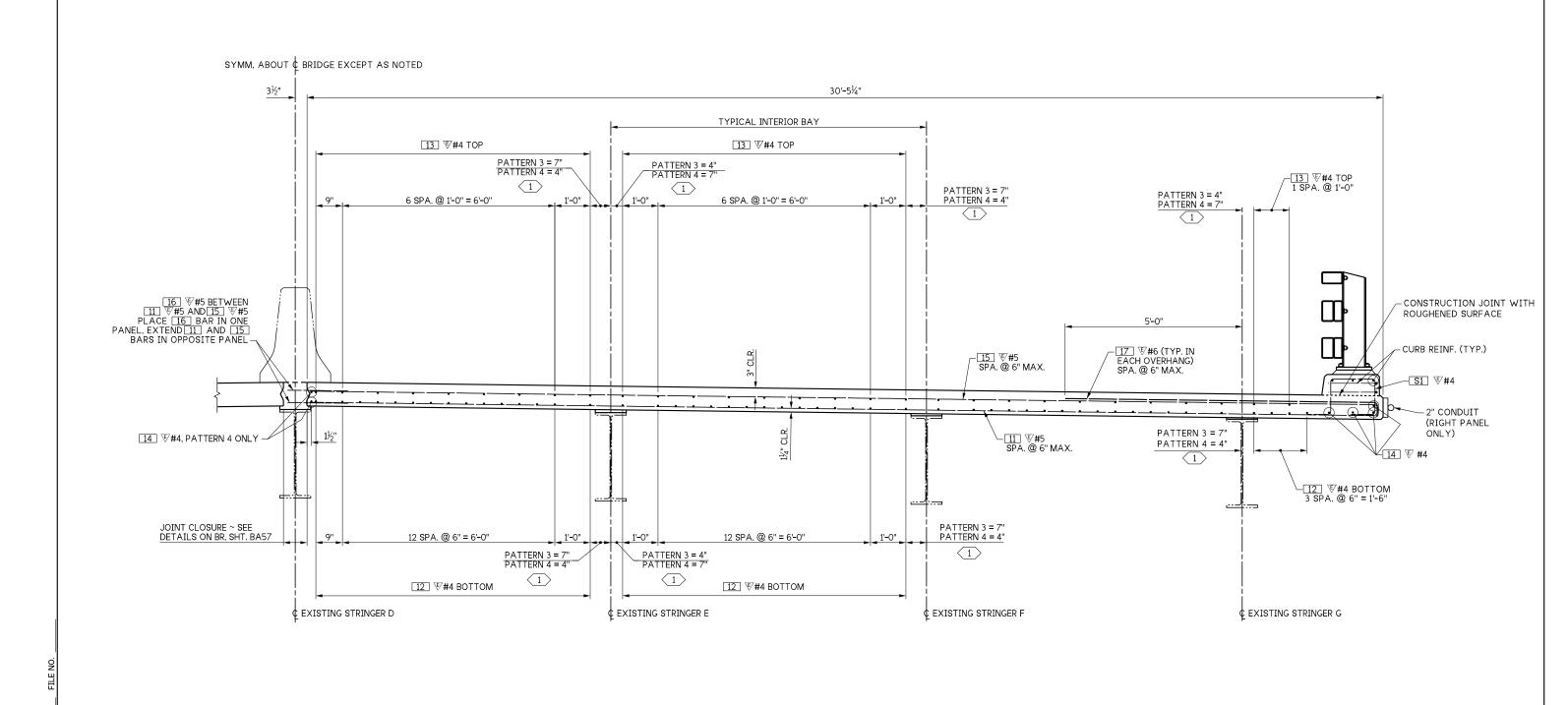
S ADDROG WASHINGTON	
SEE SHEET CT1 DATE	

I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

BRIDGE DECK REINFORCING SECTION
DETAILS 1 OF 2

PLOT DATE: 6/13/2023 PLOT TIME: 9:21:28 AM PLOTTED BY: McCarD FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/051 DECK REINF SECT 01.dgn



BRIDGE DECK PANEL REINFORCING SECTION

KEY NOTE:

 $\overline{\ \ \ }$ EACH PAIR OF ADJACENT DECK PANELS IN A BRIDGE SECTION SHALL HAVE THE SAME REINFORCING PATTERN. DECK PANEL REINFORCING SHALL ALTERNATE BETWEEN PATTERN 3 AND PATTERN 4 FOR DECK PANELS JOINED WITH A TRANSVERSE PANEL JOINT CLOSURE USING UHPC.

PLAN REF NO

BA52

SHEET

OF

ᇤ	FILE NAME BRIDGE DES. ENG.	052 DECK REINF SECT 02.dgn			REGION NO.	STATE			
뛺	BRIDGE DES. ENG.	Leland, AC) . (A OL I	i
삤	BRIDGE PROJ. ENG.						10	WASH	i
ĕ	BRIDGE PROJ. ENG. SUPERVISOR DESIGNED BY	Aldrich, BS					JOB NUMBER		i
뛺	DESIGNED BY	Mizumori, A	02/23				23	Y005	i
	CHECKED BY	O'Neill, P	05/23					1005	i
	ENTERED BY	McCarthy, DJ	02/23				CONT	RACT NO.	i
	PRELIM. PLAN BY								i
ß	ARCH. / SPEC.			REVISION	DATE	BY			





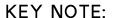
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SSIONAL ENGIN	

I-90 VANTAGE BRIDGE - REPLACE BRIDGE DECK, SPECIAL REPAIRS & DRAINAGE

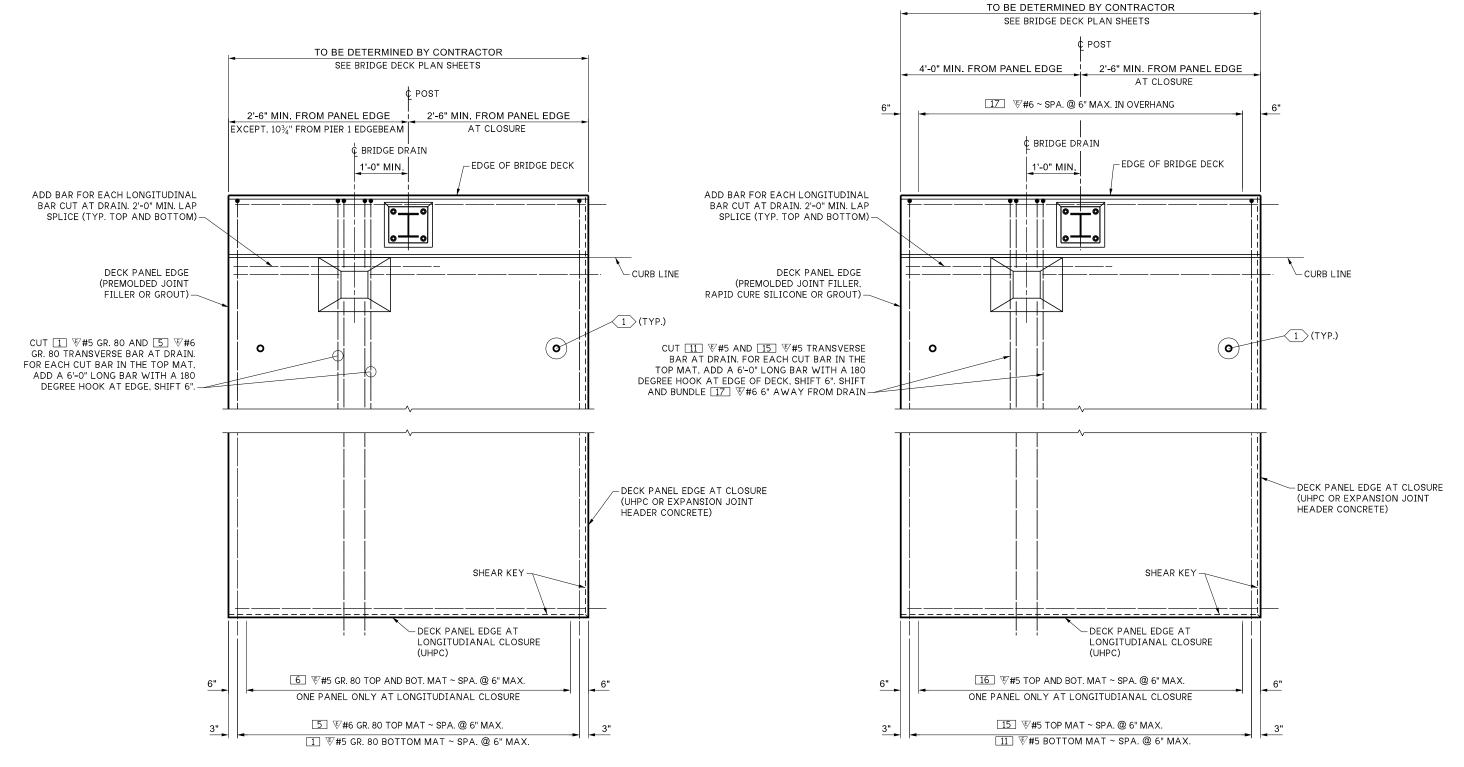
COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

BRIDGE DECK REINFORCING SECTION DETAILS 2 OF 2

PLOT DATE: 6/13/2023 PLOT TIME: 9:20:08 AM PLOTTED BY: ChurcC FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/052 DECK REINF SECT 02.dgn



2" HOLE FOR GROUTING AND VENTING. LOCATE OVER AND ALONG EACH GIRDER, STRINGER, TEMPORARY SUPPORT STRINGER, TEMPORARY SUB STRINGER AND TEMPORARY PANEL EDGEBEAM. THE MAXIMUM SPACING SHALL BE DETERMINED BY THE CONTRACTOR, BUT SHALL NOT EXCEED THE MAXIMUM SPACING USED IN THE HAUNCH GROUTING FIELD TEST PLACEMENT.

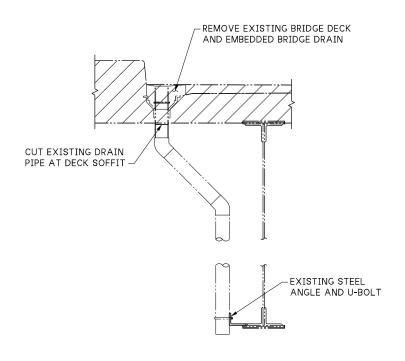


PLAN - BRIDGE DECK PANEL ~ APPROACH SPANS

PLAN - BRIDGE DECK PANEL ~ MAIN SPANS

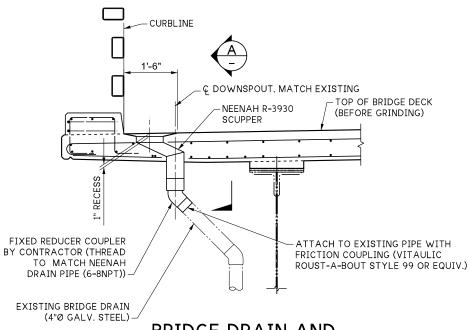
[FILE NAME	053 BRIDGE DECK DETAI	LS 1.dgn			REGION STATE					PLAN REF NO
BRIDGE DES. ENG.	Leland, AC				10 1,440		ONY J. I. MIZE	SUNN S. ALDR	I-90	
BRIDGE PROJ. ENG.					10 WASH	1 72WCDAT	OF WASHINGTON	of Washing	VANTAGE BRIDGE - REPLACE BRIDGE	BA53
SUPERVISOR	Aldrich, BS				JOB NUMBER	AND AAODO I	1 1 F 1 9 1 9 1 1 1 1 1 1 1 1 1 1 1 1 1		DECK, SPECIAL REPAIRS & DRAINAGE	
DESIGNED BY	Mizumori, A	02/23			23Y005		XXXXX XXX			SHEET
CHECKED BY	O'Neill, P	05/23					44257 F. J.	7 At 37834 37834	COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180	95
ENTERED BY	McCarthy, DJ	02/23			CONTRACT NO.		SONAL ENGIN	STONAL ENGIN		— OF
PRELIM. PLAN BY							SEE SHEET CT1	SEE SHEET CT1	BRIDGE DECK DETAILS	166
ARCH. / SPEC.			REVISION	DATE E	BY		P.E. STAMP BOX	P.E. STAMP BOX	SKID OF BEAK BETALLO	SHEETS

PLOT DATE: 6/12/2023 PLOT TIME: 3:29:50 PM PLOTTED BY: WrennMa FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/053 BRIDGE DECK DETAILS 1.dgn



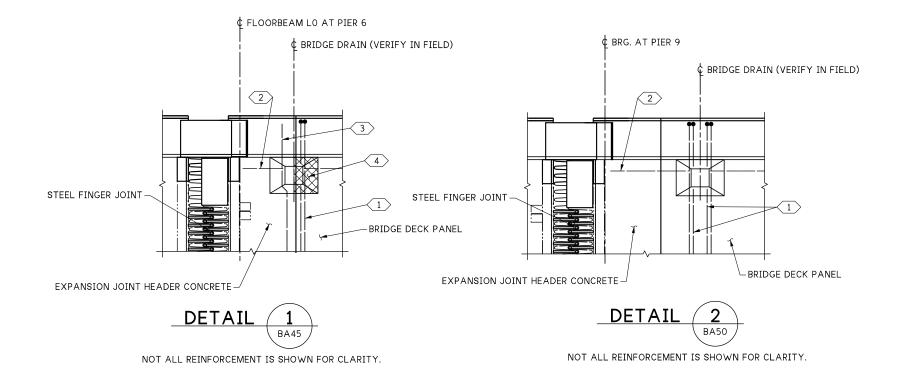
BRIDGE DRAIN AND DOWNSPOUT DETAIL

EXISTING CONDITION
SHOWN FOR TYPICAL IN-SPAN LOCATIONS,
SIMILAR NEAR ABUTMENTS.



BRIDGE DRAIN AND DOWNSPOUT DETAIL

MODIFIED CONDITION
50 LOCATIONS, APPROACH SPANS SHOWN, MAIN SPANS SIMILAR.



DRAIN, MATCH EXISTING

1'-0"

TOP OF BRIDGE DECK



KEY NOTES:

- CUT 11 \mathbb{V} #5 AND 15 \mathbb{V} #5 TRANSVERSE BAR AT DRAIN. FOR EACH CUT BAR IN THE TOP MAT, ADD A 6'-0" LONG BAR WITH A 180 DEGREE HOOK AT EDGE OF DECK OF MATCHING GRADE, SHIFT 6". SHIFT AND BUNDLE 17 \mathbb{V} #6 6" AWAY FROM DRAIN.
- 2 CUT EXTENDED LONGITUDINAL BARS IN BRIDGE DECK PANEL THAT CONFLICT WITH DRAIN.
- $\begin{picture}(60,0)\put(0,0){\line(0,0){12}}\put(0,0){\line(0,0){12}$
- 4 OPTIONAL BLOCKOUT IN DECK PANEL FOR FIELD DRAIN PLACEMENT.

NOTES:

- 1. EXISTING DRAINS SHALL BE INSPECTED AND LOCATIONS SHALL BE FIELD VERIFIED PRIOR TO FABRICATION OF BRIDGE DECK PANELS.
- 2. THE CONTRACTOR MAY ELECT TO REPLACE EXISTING STEEL DOWNSPOUTS AND ATTACHMENTS IN KIND.
- 3. SEE AS-BUILTS FOR ADDITIONAL INFORMATION.
- 4, REPAIR GALVANIZING AS NEEDED.

ᇤ	FILE NAME	054 DECK DRAIN DETAIL 1.dgn					REGION NO.	STATE	Γ	
뿛	BRIDGE DES. ENG.	Leland, AC) / A OLL	ĺ	
	BRIDGE PROJ. ENG.						10	WASH	ĺ	
ĕ	SUPERVISOR DESIGNED BY	Aldrich, BS					JOB	NUMBER	l	
æ	DESIGNED BY	Mizumori, A	02/23				23	Y005	l	
	CHECKED BY	O'Neill, P	05/23				231003			
	ENTERED BY	McCarthy, DJ	02/23				CONT	RACT NO.	l	
	PRELIM. PLAN BY		•						ĺ	
SR	ARCH. / SPEC.		•	REVISION	DATE	BY			L	







I-90 VANTAGE BRIDGE - REPLACE BRIDGE DECK, SPECIAL REPAIRS & DRAINAGE

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

PLAN REF NO

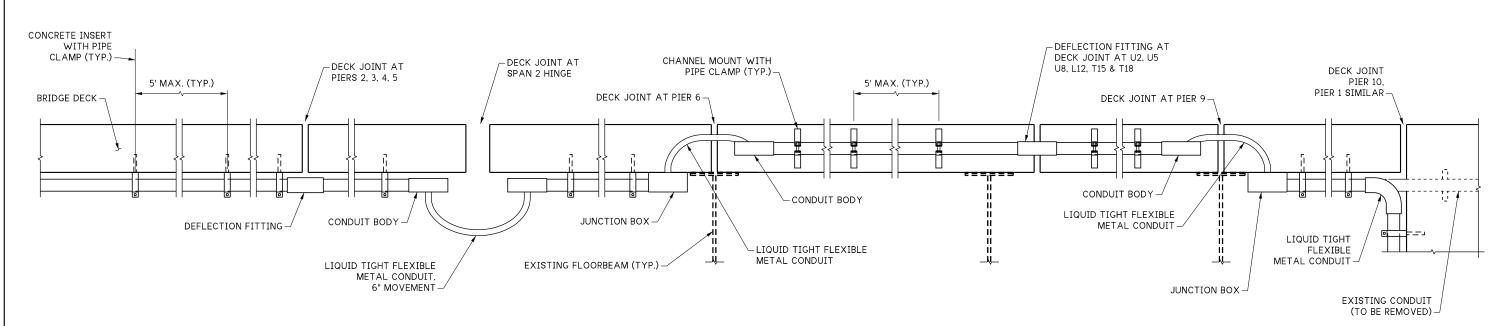
BA54

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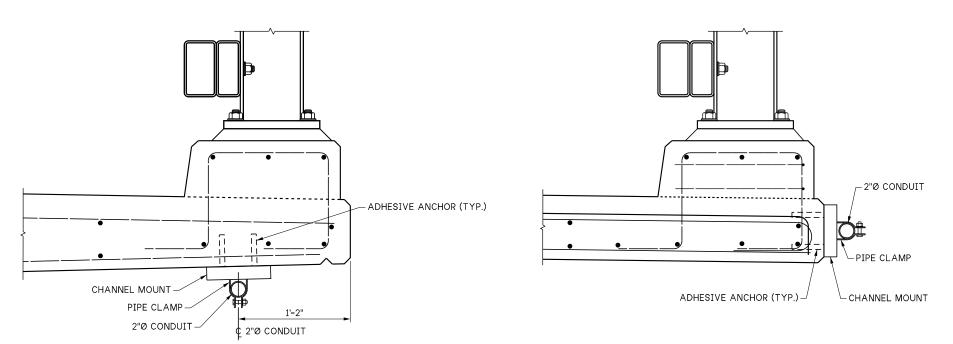
OF

BRIDGE DECK DETAILS DRAIN

ARCH. / SPEC. REVISION DATE BY DATE 6/12/2023 PLOT TIME: 3:29:01 PM PLOTTED BY: WrennMa FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/054 DECK DRAIN DETAIL 1.dgn



ELEVATION



TYPICAL SECTION

SPANS 1-5 AND 9

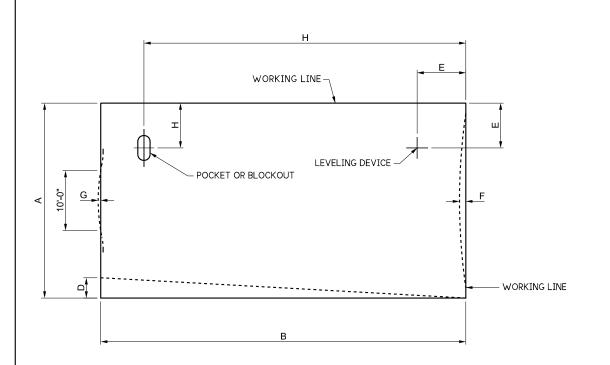
TYPICAL SECTION SPANS 6-8

NOTES

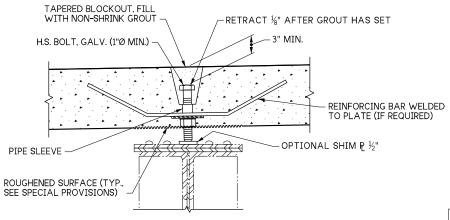
- 1. THE CONTRACTOR SHALL INSTALL THE CONDUIT AND ASSOCIATED UTILITY SUPPORT HARDWARE. THE CONDUIT AND UTILITY SUPPORT HARDWARE WILL BE FURNISHED BY THE ENGINEER.
- 2. FOR DETAILS NOT SHOWN IN THE PLANS, REFER TO CONTRACT PROVISIONS.

l									
FILE NAME	055 BRIDGE UTILITIES DETAILS 1.dgn			REGION STATE					PLAN REF NO
贳 BRIDGE DES. ENG.	Leland, AC			10 14/484		JOSY J. I. MIZZ	S. ALDR	I-90	
யூ BRIDGE PROJ. ENG.				10 WASH	WSDOT	WASHING TO THE REPORT OF THE PARTY OF THE PA	Total WASHING F	VANTAGE BRIDGE - REPLACE BRIDGE	BA55
SUPERVISOR	Aldrich, BS			JOB NUMBER	WSDOT	1 1 (E & 1978 / 2 \)		DECK, SPECIAL REPAIRS & DRAINAGE	
置 DESIGNED BY	Mizumori, A 02/23			23Y005		W.V. Carlotte		DEOK, OF ECTAL KETATION & DIVATION OF	SHEET
CHECKED BY	O'Neill, P 05/23			231003		44257	70 At 37834	COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180	97
ENTERED BY	Reed, M 02/23			CONTRACT NO.		SSIONAL ENGIN	SSIONAL ENGINEER		- OF
PRELIM. PLAN BY						SEE SHEET CT1	SEE SHEET CT1	BRIDGE DECK DETAILS	166
S ARCH. / SPEC.		REVISION	DATE BY	1		PE STAMP BOX	PE STAMP BOX	UTILITIES	SHEETS

PLOT DATE: 6/12/2023 PLOT TIME: 3:28:16 PM PLOTTED BY: WrennMa FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/055 BRIDGE UTILITIES DETAILS 1.dgn



PLAN FABRICATION TOLERANCE

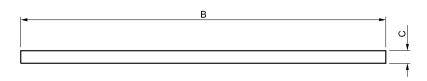


LEVELING DEVICE DETAIL

CONTRACTOR SHALL SIZE THE LEVELING DEVICE FOR ANTICIPATED LOADS. PROVIDE 2 MINIMUM PER SUPPORTING GIRDER. STRINGER, TEMPORARY SUPPORT STRINGER AND TEMPORARY SUB STRINGER.

	FABRICATION TOLERANCE TABLE								
ITEM	DESCRIPTION	TOLERANCES							
Α	LENGTH	±¼"							
В	WIDTH	±1⁄4"							
С	DEPTH	±1⁄4"							
D	VARIATION FROM SPECIFIED PLAN END SQUARENESS OR SKEW	±1/8"							
Е	LOCATION OF LEVELING DEVICE	±1"							
F	SWEEP	±1⁄8"							
G	LOCAL SMOOTHNESS OF ANY SURFACE	⅓" IN 10 FEET							
Н	LOCATION OF SHEAR CONNECTOR POCKET OR BLOCKOUT	±½"							

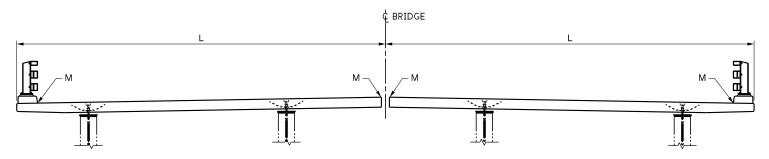
	ERECTION TOLERANCE TABL	E
ITEM	DESCRIPTION	TOLERANCES
L	HORIZONTAL SETTING TOLERANCE MEASURED FROM A COMMON REFERENCE POINT TO EDGE OF PANEL	±½"
М	ERECTION ELEVATION TOLERANCE	±1⁄4"
N	STEEL TO TRANSVERSE EDGE OF PANEL	±1"
0	TRANSVERSE JOINT WIDTH	±1⁄4"
Р	ELEVATION DIFFERENCE AT TRANSVERSE JOINT	±½"



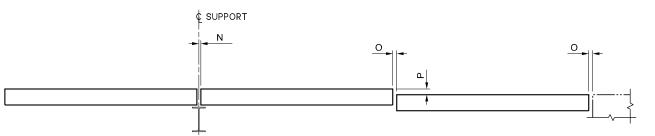
ELEVATION FABRICATION TOLERANCE

NOTES:

- 1. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE LEVELING DEVICE. ALTERNATIVE DEVICES MAY BE SUBSTITUTED WITH APPROVAL FROM THE ENGINEER PROVIDED THAT THEY ARE ADJUSTABLE AND CAN PROVIDE EQUAL LOAD DISTRIBUTION TO THE BEAMS.
- 2. LEVELING BOLT BLOCKOUTS SHALL BE GROUTED PRIOR TO ALLOWING TRAFFIC ON THE DECK PANEL.
- 3. LEVELING BOLTS PROJECTING FROM SOFFIT AFTER REMOVAL OF TEMPORARY SUPPORT STEEL SHALL BE CUT FLUSH WITH THE DECK SOFFIT AND COATED WITH GALVANIZING REPAIR PAINT.



TRANSVERSE ERECTION TOLERANCE



LONGITUDINAL ERECTION TOLERANCE

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山	FILE NAME BRIDGE DES. ENG.	056 TOLERANCE ANI	OLERANCE AND ERECTION DTL 01.dgn							
뿛	BRIDGE DES. ENG.	Leland, AC					NO.) . (A O	ĺ	
щ	BRIDGE PROJ. ENG.						10	WASH	1 :	
ΣĬ	SUPERVISOR DESIGNED BY	Aldrich, BS					JOB NUMBER			
8	DESIGNED BY	Mizumori, A	02/23				23	Y005	ĺ	
	CHECKED BY	O'Neill, P	05/23					1005	ĺ	
	ENTERED BY	McCarthy, DJ	02/23				CONT	RACT NO.	ĺ	
ا	PRELIM. PLAN BY								ĺ	
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I-90 VANTAGE BRIDGE - REPLACE BRIDGE DECK, SPECIAL REPAIRS & DRAINAGE

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

PLAN REF NO

BA56

SHEET

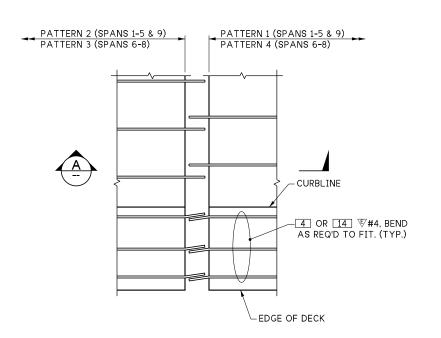
OF

DECK PANEL DETAILS TOLERANCES AND ERECTION

PLOT DATE: 6/13/2023 PLOT TIME: 6:33:52 AM

PLOTTED BY: McCarD

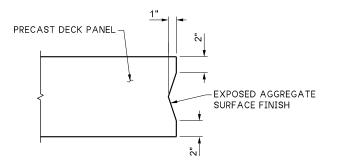
FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/056 TOLERANCE AND ERECTION DTL 01.dgn



EDGE OF DECK PANEL -6 OR 16 ♥#5 FOR NON-CONTRACT LAP SPLICE. PLACE CENTERED BETWEEN BARS EXTENDING FROM OPPOSITE PANEL, TOP AND BOTTOM MAT (TYP.) TRANSVERSE DECK REINFORCEMENT (TYP.) EDGE OF DECK PANEL 2" MIN. 4" MAX.

KEY NOTE:

THE CONTRACTOR MAY DETAIL THESE DIMENSIONS UP TO 2" LARGER AT SELECT LOCATIONS TO ACCOMMODATE ERECTION TOLERANCE UNDERRUN. EXTENDED BARS MAY THEN BE FIELD CUT IF NEEDED, BUT THE EXPOSED BAR LENGTH AND JOINT WIDTH SHALL NOT BE LESS THAN THE DIMENSION SPECIFIED.

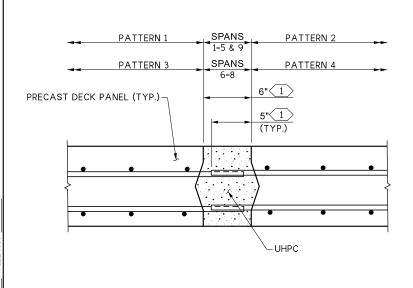


PANEL EDGE DETAIL

PROVIDE WHERE GROUT, CONCRETE OR UHPC IS CAST DIRECTLY AGAINST PANEL EDGE. ALTERNATE PANEL EDGE GEOMETRY MUST BE APPROVED BY ENGINEER.

PLAN - LONGITUDINAL PANEL JOINT

BOTTOM MAT SHOWN, TOP MAT SIMILAR

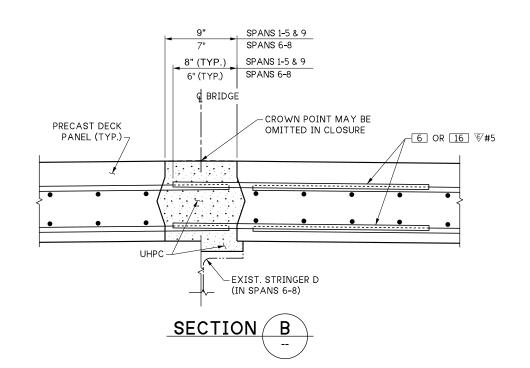


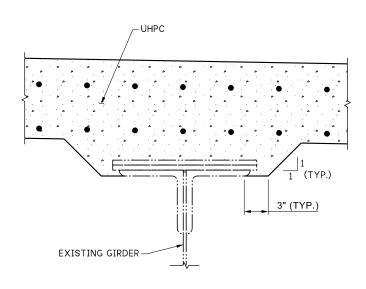
SECTION /

PLAN - TRANSVERSE

PANEL JOINT

BOTTOM MAT SHOWN





SECTION TRANSVERSE PANEL JOINT AT BEAM

GIRDER IN SPANS 1-5 & 9 SHOWN, STRINGERS IN SPANS 6-8 SIMILAR.

ᇤ	FILE NAME BRIDGE DES. ENG.	IE 057 DECK CLOSURE JOINTS.dgn REGION								
뚨	BRIDGE DES. ENG.	Leland, AC). (A OLI	1 .	
띘	BRIDGE PROJ. ENG.						10	WASH	1 1	
ĕ	BRIDGE PROJ. ENG. SUPERVISOR DESIGNED BY	Aldrich, BS					JOB	NUMBER] '	
쁊	DESIGNED BY	Mizumori, A	02/23				23	Y005		
	CHECKED BY	O'Neill, P	05/23] -~	. 003		
	ENTERED BY	Reed, M	02/23				CONT	RACT NO.	1	
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S AL DON'S WASHINGTON	VANTAGE BRIE DECK, SPECIAL COLUMBIA RIVER

I-90 IDGE - REPLACE BRIDGE L REPAIRS & DRAINAGE

VANTAGE BRIDGE NO. 90/180

PLAN REF NO

BA57

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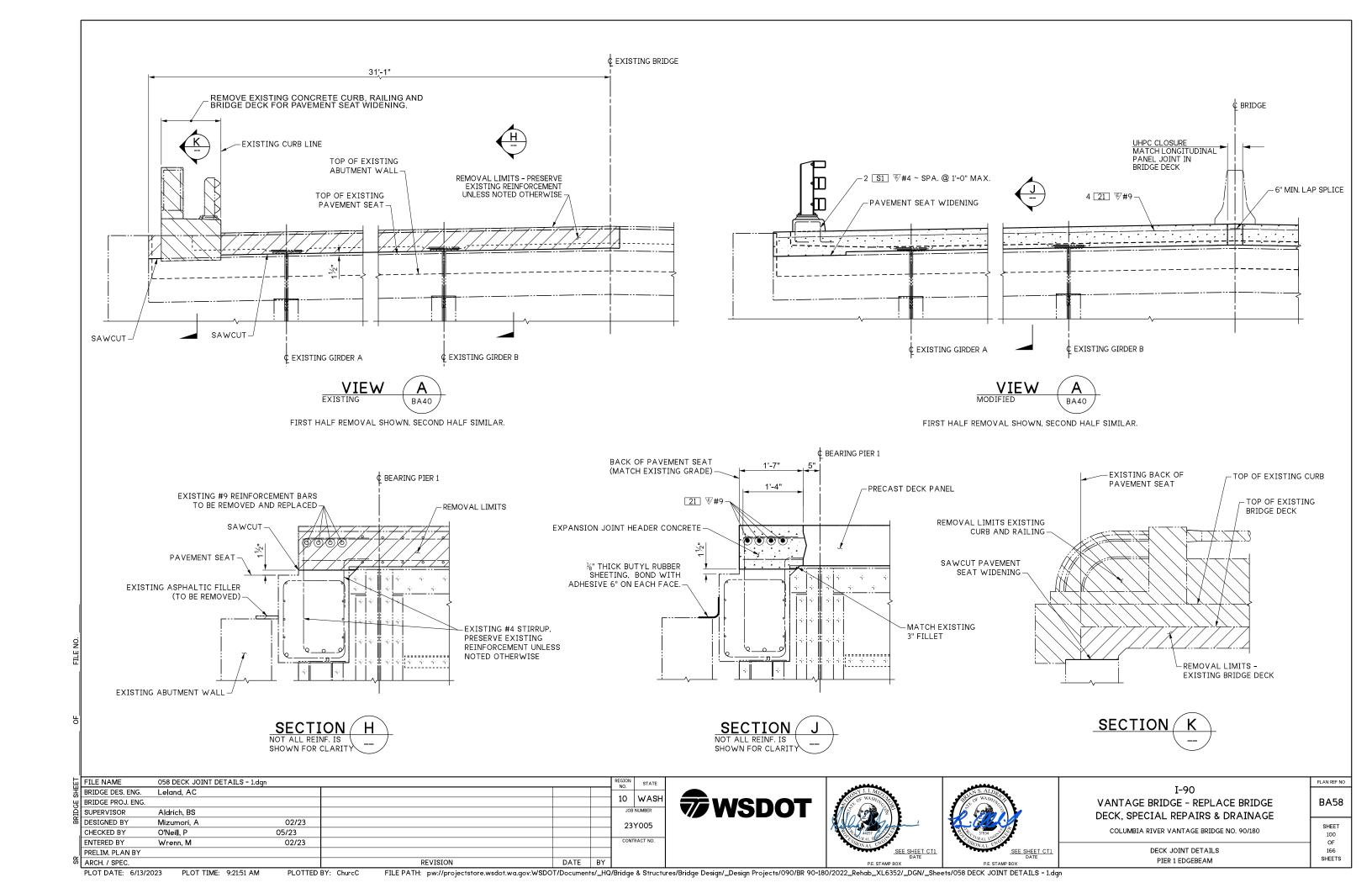
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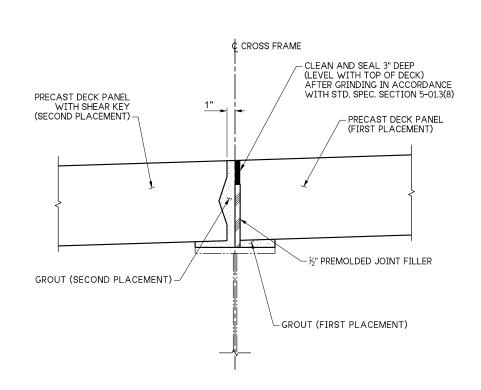
DECK PANEL DETAILS JOINT CLOSURES

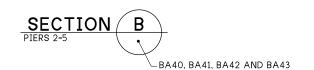
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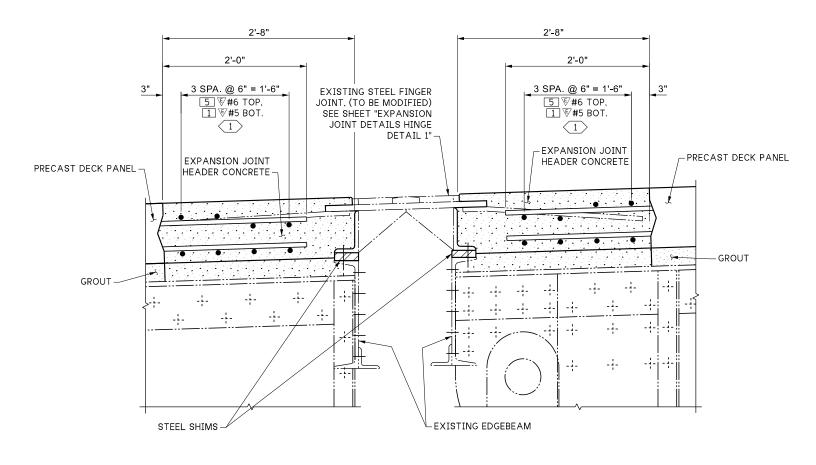
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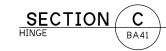
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KEY NOTE:

1 PROVIDE 6" LAP SPLICE IN UHPC LONGITUDINAL PANEL JOINT CLOSURE.

BENDING DIAGRAM

5

PLAN REF NO

BA59

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101 OF 166

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ᇤ	FILE NAME BRIDGE DES. ENG.	059 DECK JOINT DE	TAILS - 2.dgn				REGION NO.	STATE	
뿛	BRIDGE DES. ENG.	Leland, AC) . (A O I I	1
щ	BRIDGE PROJ. ENG. SUPERVISOR DESIGNED BY						10	WASH	
ĕ	SUPERVISOR	Aldrich, BS					JOB	NUMBER	Ι '
8	DESIGNED BY	Mizumori, A	02/23				23	Y005	
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	ENTERED BY	Reed, M	02/23				CONT	RACT NO.	
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PLOT DATE: 6/12/2023 PLOT TIME: 3:25:18 PM







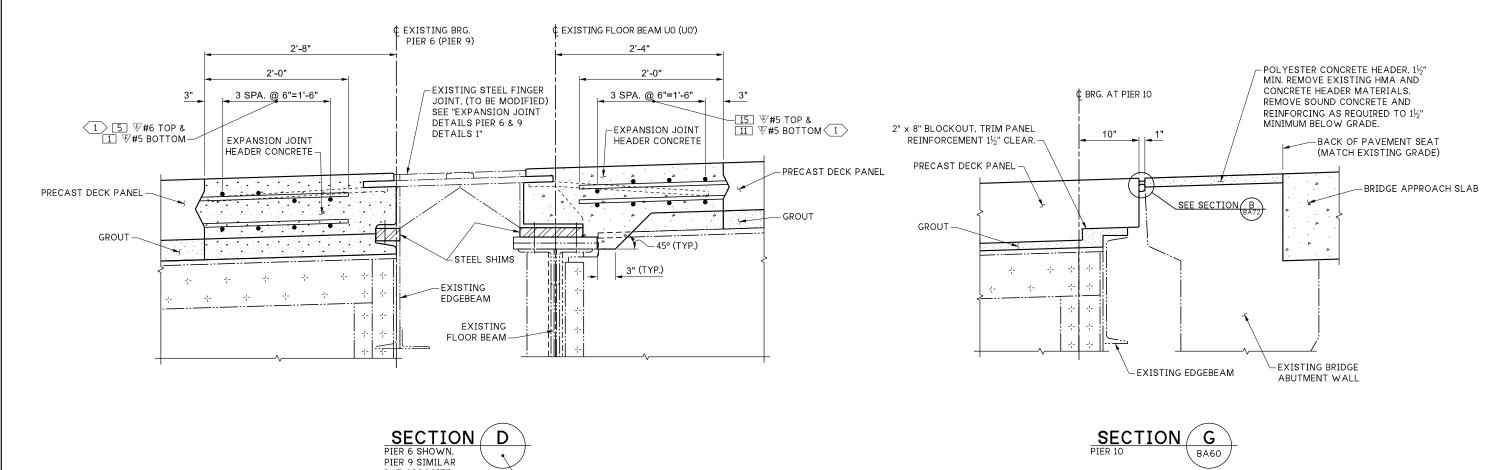
I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

PIERS 2-5 AND HINGE

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

DECK JOINT DETAILS

PLOTTED BY: WrennMa FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/059 DECK JOINT DETAILS - 2.dgn



SECTION G
PIER 10 BA60

KEY NOTE:

1 PROVIDE 6" LAP SPLICE IN UHPC LONGITUDINAL PANEL JOINT CLOSURE.

BENDING DIAGRAM 5 & 15 1 & 11

PLAN REF NO

BA60

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102 OF 166

ᇤ	FILE NAME BRIDGE DES. ENG.	060 DECK JOINT DETAILS - 3.dgn					REGION NO.	STATE	П
뿛	BRIDGE DES. ENG.	Leland, AC). (A OLL	ĺ
ij	BRIDGE PROJ. ENG.						10	WASH	ı
ĕ	SUPERVISOR DESIGNED BY	Aldrich, BS					JOB	NUMBER	ĺ
æ	DESIGNED BY	Mizumori, A	02/23				23.	Y005	ĺ
	CHECKED BY	O'Neill, P	05/23						ı
	ENTERED BY	Reed, M	02/23				CONT	RACT NO.	ı
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BUT OPPOSITE







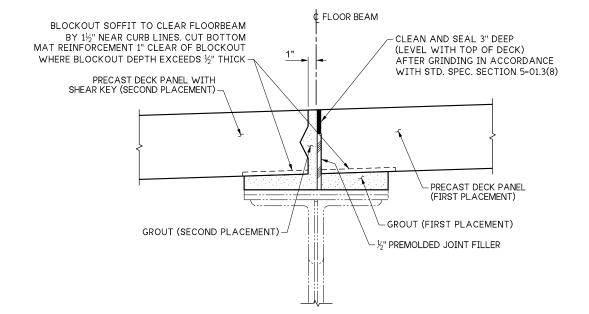
I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180 DECK JOINTS DETAIL

PIER 6, 9 AND 10

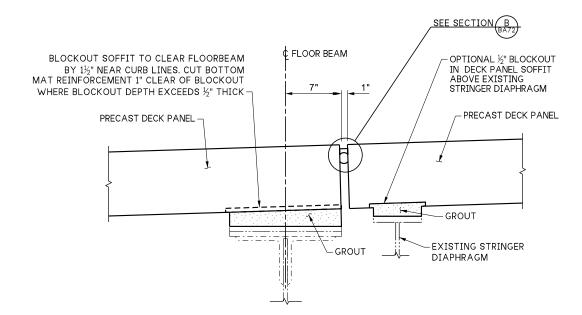
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─BA44 AND BA49





PANEL JOINTS AT PANEL POINTS 1, 3, 4, 6, 7, 9-11, 13, 14, 16 & 17





PANEL EXPANSION JOINT AT PANEL POINTS 2, 5, 8, 12, 15 &18

- 1									
ᇤ	FILE NAME	061 DECK JOINT DE	D61 DECK JOINT DETAILS - 4.dqn						
뿛	BRIDGE DES. ENG.	Leland, AC					NO.		ı
щ	BRIDGE PROJ. ENG.						10	WASH	i
	SUPERVISOR	Aldrich, BS					JOB	NUMBER	ı
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	CHECKED BY	O'Neill, P	05/23] -	1005	ı
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VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

PLAN REF NO

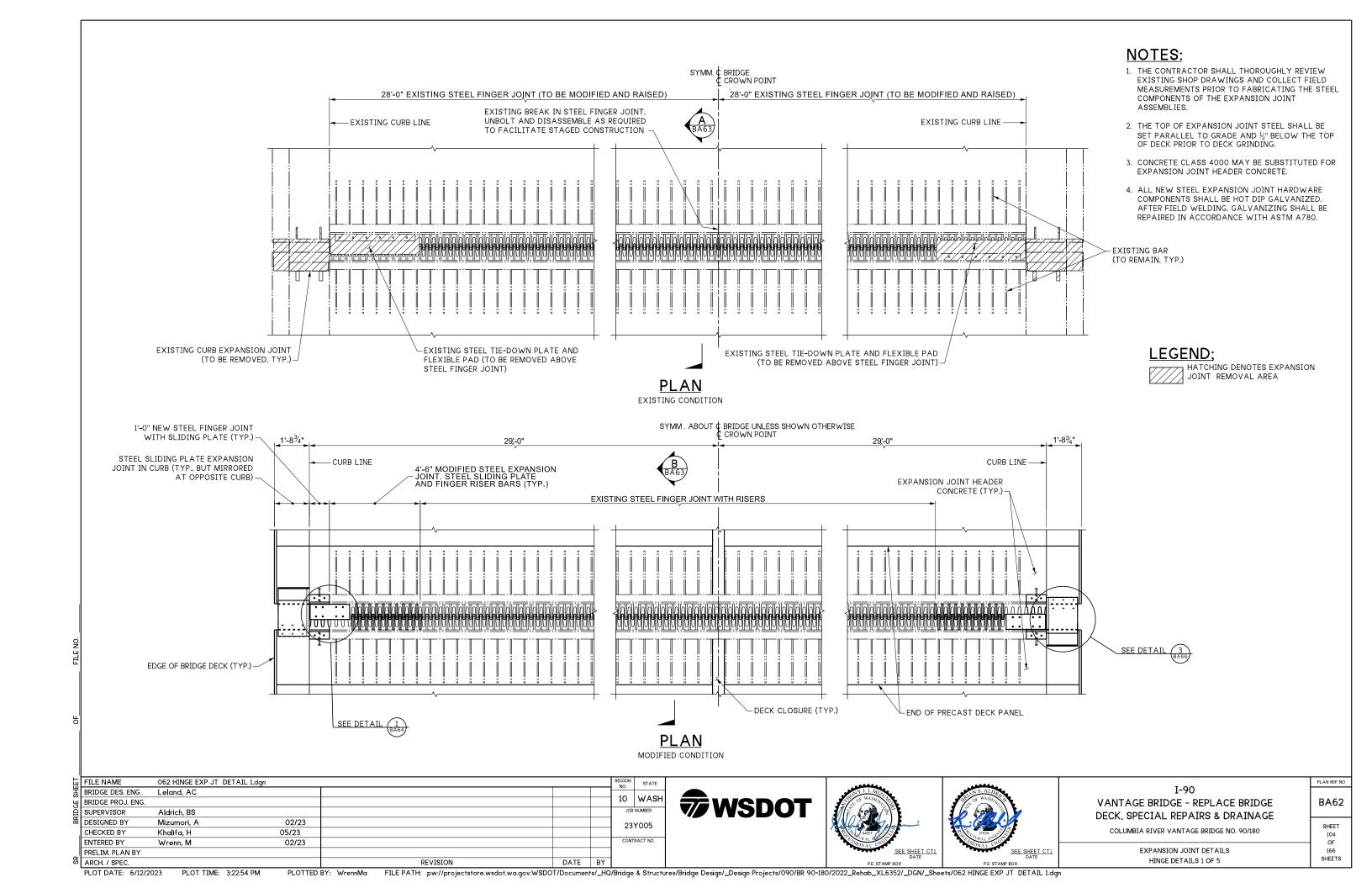
BA61

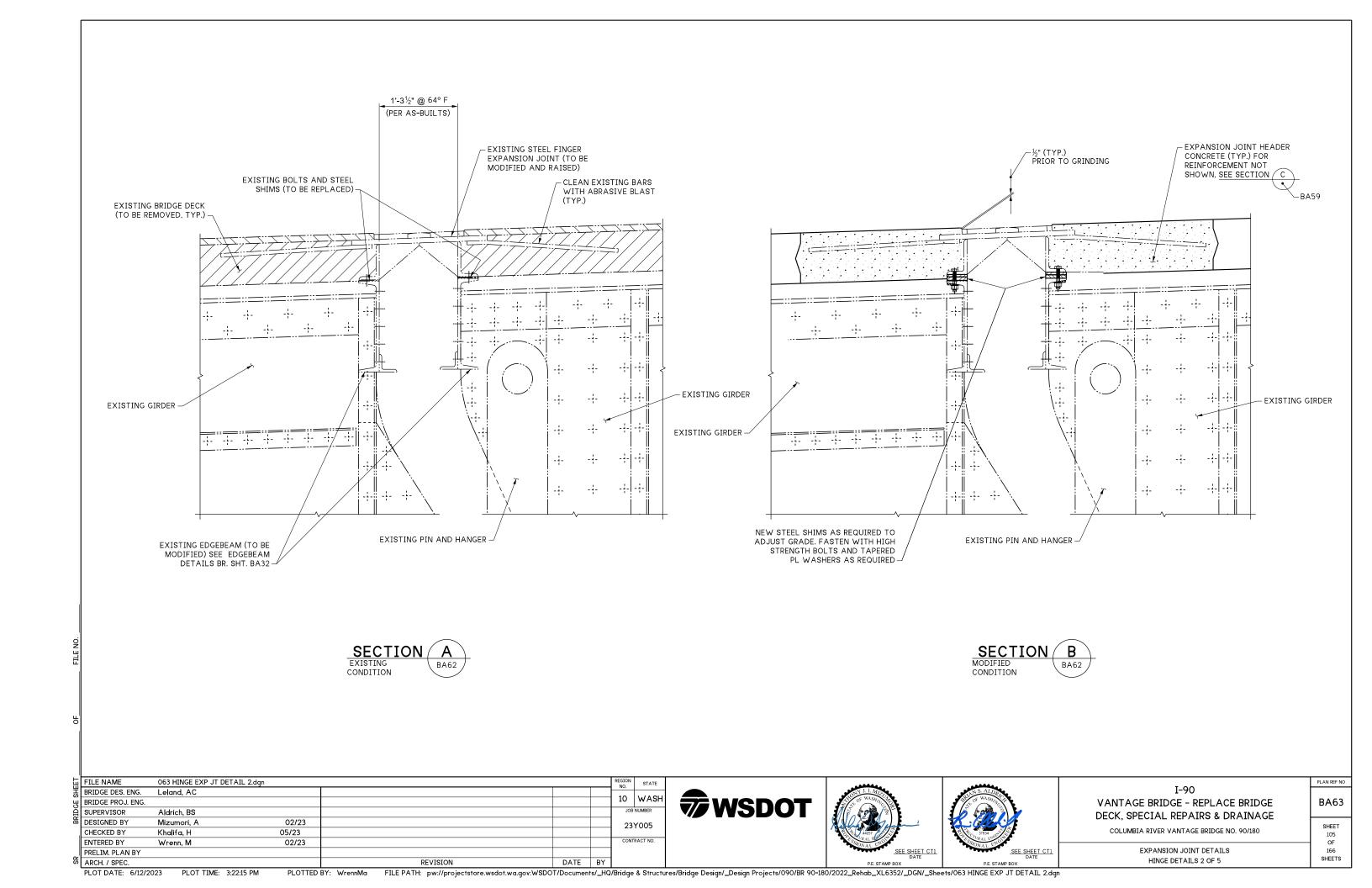
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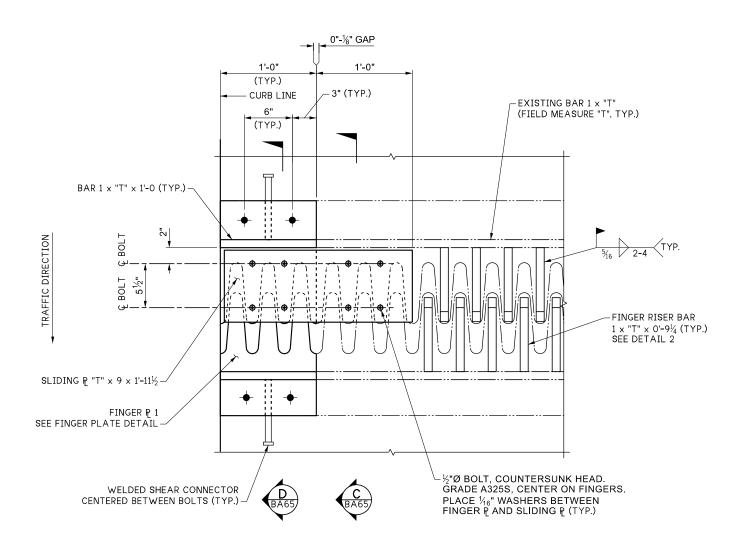
103 OF 166

DECK JOINTS DETAIL
TRUSS PANEL POINTS

PLOT DATE: 6/12/2023 PLOT TIME: 3:23:43 PM PLOTTED BY: WrennMa FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/061 DECK JOINT DETAILS - 4.dgn

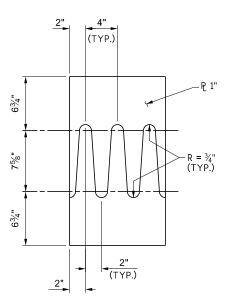






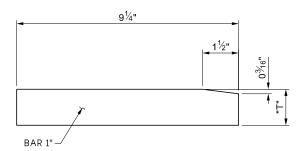


SLIDING PLATE AT CURB OMITTED FOR CLARITY. BOLT STEEL SLIDING PLATE ON SIDE OF JOINT FACING ONCOMING TRAFFIC.



FINGER PLATE DETAIL

FIELD MEASURE TO ENSURE FINGER PATTERN MATCHES EXISTING ONE CURB SHOWN, OTHER CURB SIMILAR





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山	FILE NAME BRIDGE DES. ENG.	064 HINGE EXP JT D	DETAIL 3.dgn				REGION NO.	STATE	
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Ж	BRIDGE PROJ. ENG.						10	WASH	ı
ĕ	BRIDGE PROJ. ENG. SUPERVISOR DESIGNED BY	Aldrich, BS					JOB	NUMBER	ı
æ	DESIGNED BY	Mizumori, A	02/23				23	Y005	ı
	CHECKED BY	Khalifa, H	05/23					1005	i
	ENTERED BY	Wrenn, M	02/23				CONT	RACT NO.	ı
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VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

PLAN REF NO

BA64

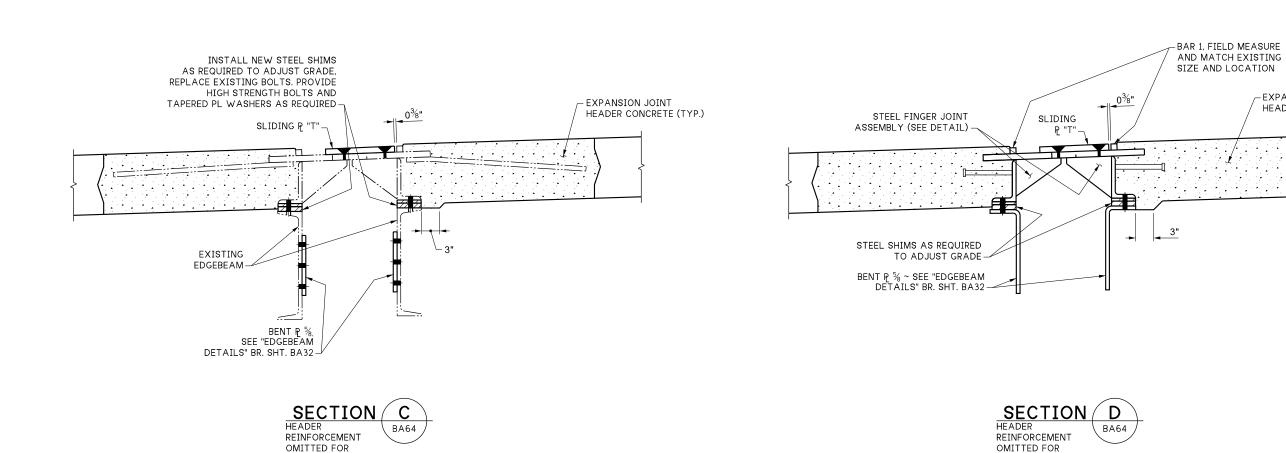
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106 OF 166

SHEETS

EXPANSION JOINT DETAILS HINGE DETAILS 3 OF 5

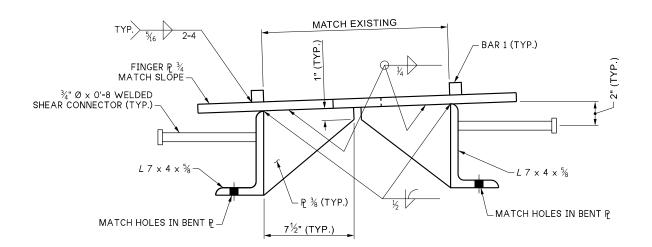
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CLARITY

EXPANSION JOINT
HEADER CONCRETE (TYP.)

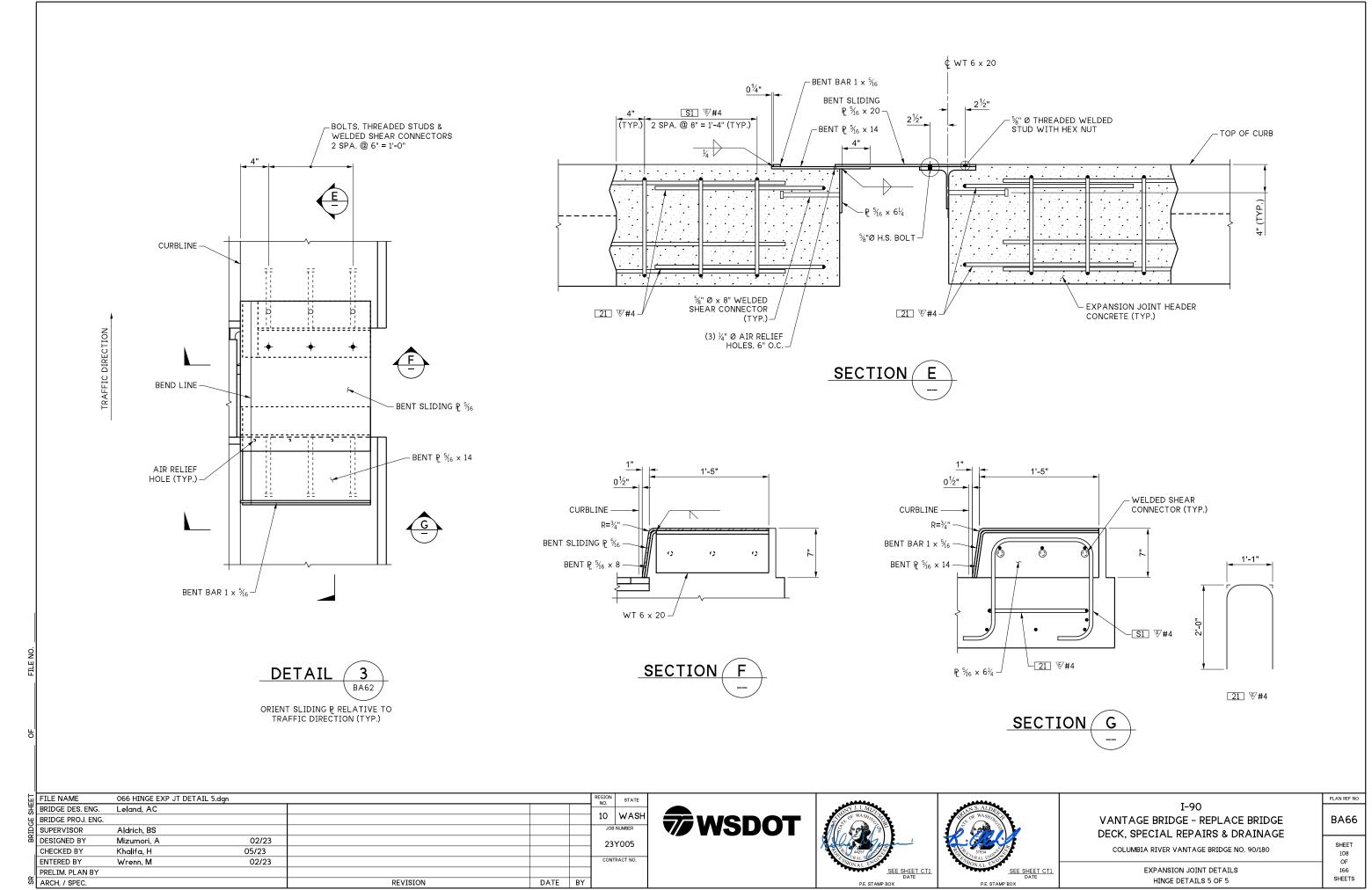
CLARITY



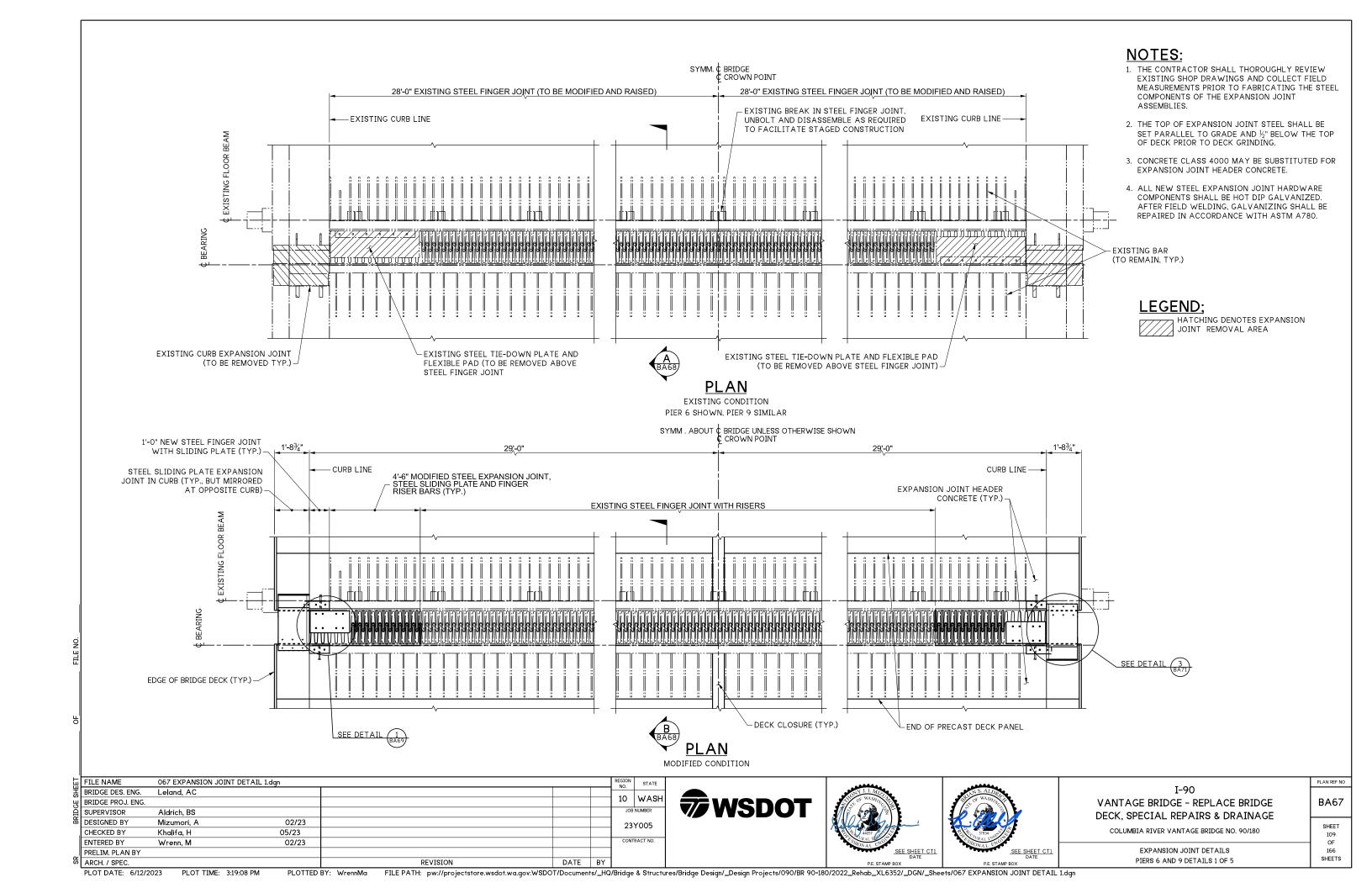
STEEL FINGER JOINT ASSEMBLY DETAIL

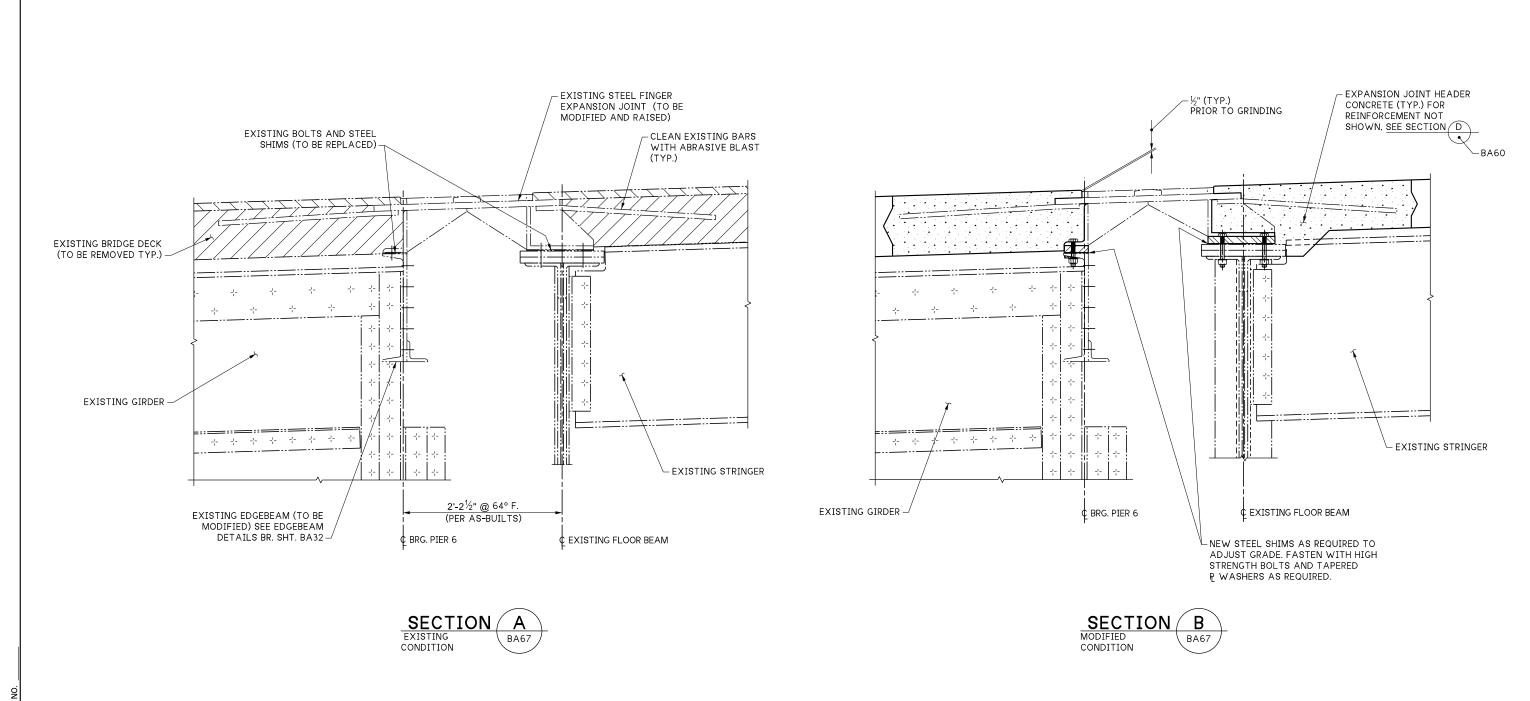
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FILE NAME	065 HINGE EXP JT DETAIL 4.dgn			REGION STATE					PLAN REF NO
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யூ BRIDGE PROJ. ENG				10 WASH	775 WCDOT	NASHIN THE RESERVE OF WASHINGTON	St. OF WASHINGS	VANTAGE BRIDGE - REPLACE BRIDGE	BA65
SUPERVISOR	Aldrich, BS			JOB NUMBER		1 1 (F. 1 5) (S) (S) (S)		DECK, SPECIAL REPAIRS & DRAINAGE	
置 DESIGNED BY	Mizumori, A 02/23			23Y005		W. W. Salari		<u>'</u>	SHEET
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PRELIM. PLAN BY						SEE SHEET CT1	SEE SHEET CT1	EXPANSION JOINT DETAILS	166
ARCH. / SPEC.		REVISION	DATE BY	1		P.E. STAMP BOX	P.E. STAMP BOX	HINGE DETAILS 4 OF 5	SHEETS

PLOT DATE: 6/12/2023 PLOT TIME: 3:20:48 PM PLOTTED BY: WrennMa FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/065 HINGE EXP JT DETAIL 4.dgn



PLOT DATE: 6/12/2023 PLOT TIME: 3:20:02 PM PLOTTED BY: WrennMa FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/066 HINGE EXP JT DETAIL 5.dgn





買	FILE NAME	068 EXPANSION JOINT	DETAIL 2.dgn				REGION NO.	STATE	
뿛	BRIDGE DES. ENG.	Leland, AC							i
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ĕ	SUPERVISOR	Aldrich, BS					JOB	NUMBER	i
器	DESIGNED BY	Mizumori, A	02/23				231	Y005	i
	CHECKED BY	Khalifa, H	05/23					1005	i
	ENTERED BY	Wrenn, M	02/23				CONT	RACT NO.	i
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I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

PLAN REF NO

BA68

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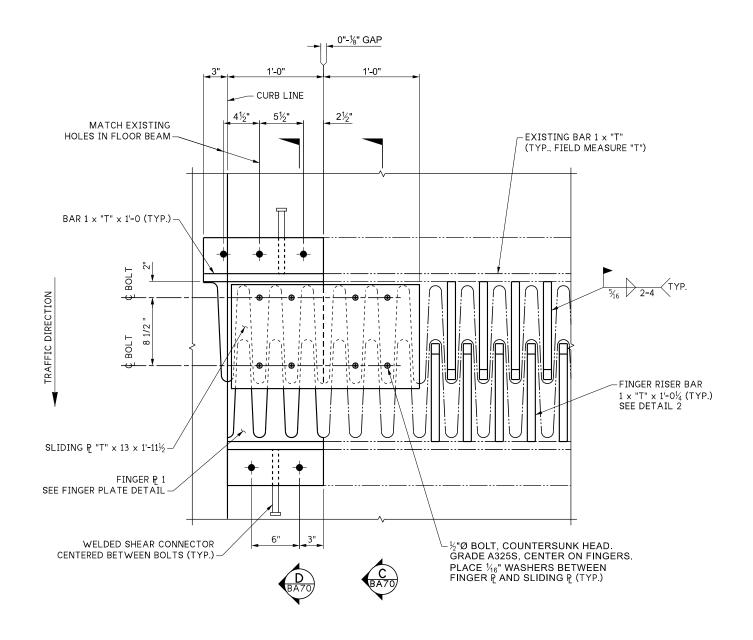
110 OF 166

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

EXPANSION JOINT DETAILS PIERS 6 AND 9 DETAILS 2 OF 5

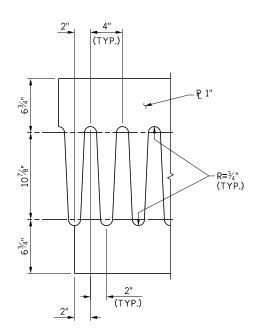
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PLOT DATE: 6/12/2023 PLOT TIME: 3:18:27 PM



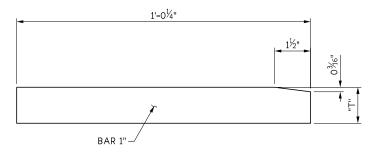


SLIDING PLATE AT CURB OMITTED FOR CLARITY. BOLT STEEL SLIDING PLATE ON SIDE OF JOINT FACING ONCOMING TRAFFIC.



FINGER PLATE DETAIL

ONE CURB SHOWN OTHER CURB SIMILAR FIELD MEASURE TO ENSURE FINGER PATTERN MATCHES EXISTING





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ᇤ	FILE NAME BRIDGE DES. ENG.	069 EXPANSION JOINT DETAIL 3.dgn								
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I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

PLAN REF NO

BA69

SHEET

111 OF 166

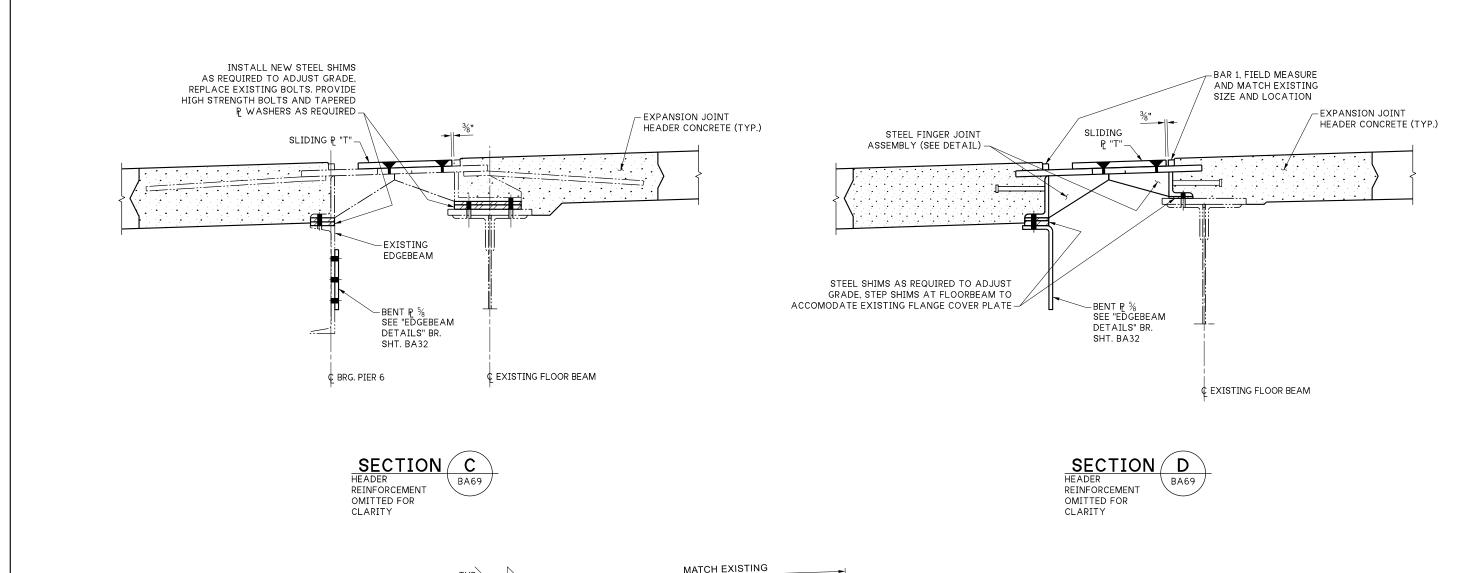
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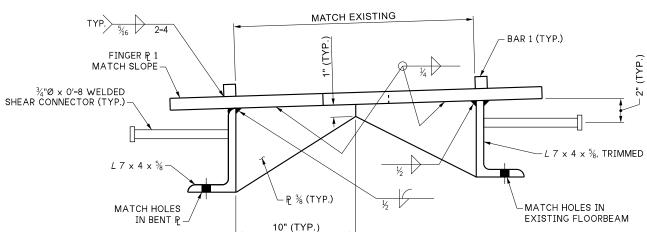
COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

EXPANSION JOINT DETAILS PIERS 6 AND 9 DETAILS 3 OF 5

PLOT DATE: 6/12/2023 PLOT TIME: 3:17:41 PM PLOTTED BY: WrennMa FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/069 EXPANSION JOINT DETAIL 3.dgn

P.E. STAMP BOX

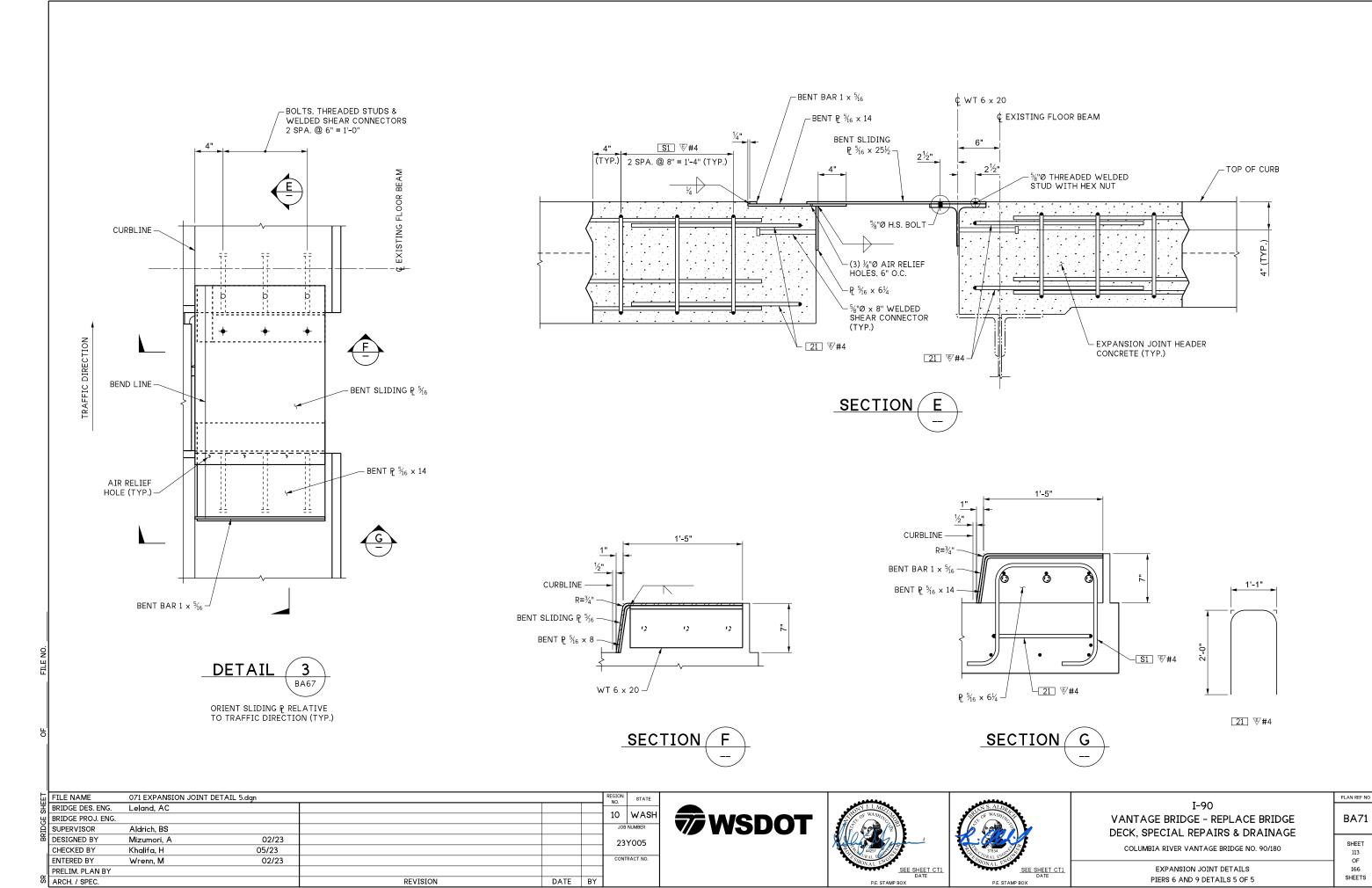




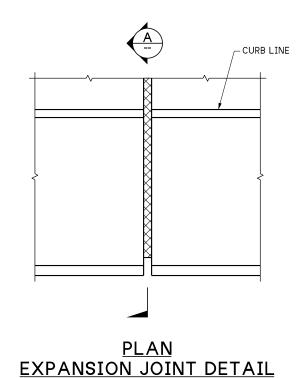
STEEL FINGER JOINT ASSEMBLY DETAIL

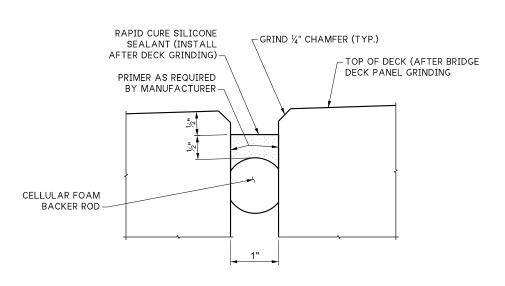
FILE NAME	070 EXPANSION JOINT DETAIL 4.dgn			GION STATE					PLAN REF NO
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BRIDGE PROJ. ENG	· >.			10 WASH		OF WASHING TO	ST OF WASHING F	VANTAGE BRIDGE - REPLACE BRIDGE	BA70
SUPERVISOR	Aldrich, BS			JOB NUMBER	WSDOI	1/6 1916/2/		DECK, SPECIAL REPAIRS & DRAINAGE	
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CHECKED BY	Khalifa, H 05/23			231003		44257 E	7 TO 37834 12 5	COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180	112
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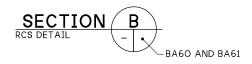
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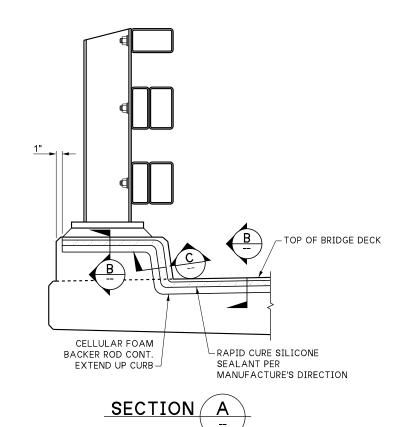


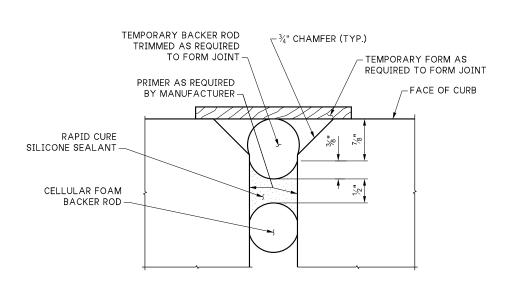
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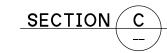












- 1									
Ë	FILE NAME BRIDGE DES. ENG.	072 RCS JOINT DETAILS.dgn					REGION NO.	STATE	
뿘	BRIDGE DES. ENG.	Leland, AC) / A OLL	1
Ж	BRIDGE PROJ. ENG.						10	WASH	(
ĕ	SUPERVISOR DESIGNED BY	Aldrich, BS					JOB	NUMBER	l '
8	DESIGNED BY	Mizumori, A	02/23				23	Y005	
	CHECKED BY	O'Neill, P	05/23] -~	1003	
	ENTERED BY	McCarthy, DJ	02/23				CONT	RACT NO.	
	PRELIM. PLAN BY						1		
Ŗ	ARCH. / SPEC.			REVISION	DATE	BY	1		





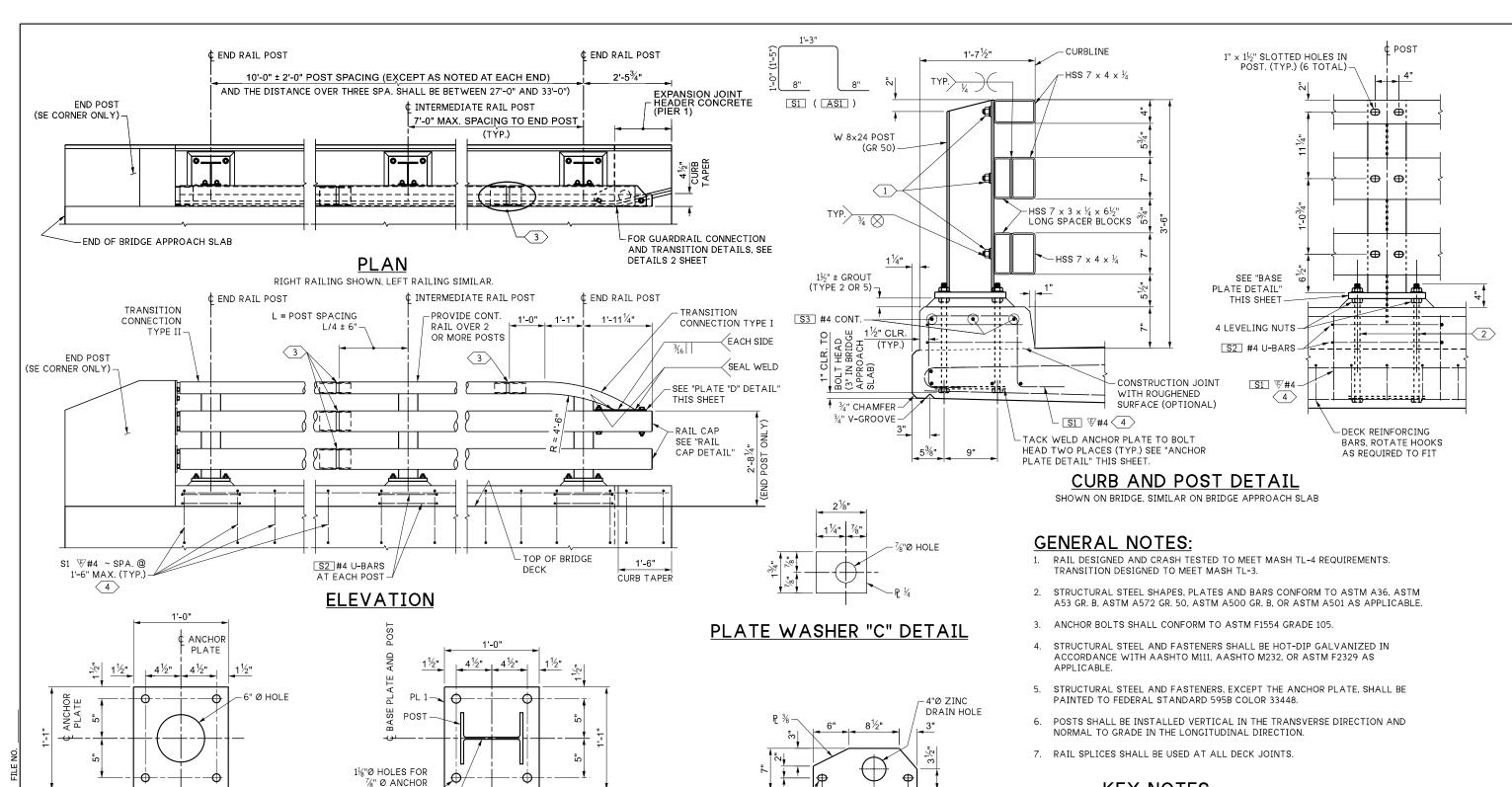


I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

EXPANSION JOINT DETAILS
RAPID CURE SILICONE

"(ARCH. 7 SPEC. | DATE | BT | DESTAMP BOX | PESTAMP BOX |



BOLTS (TYP.) 8¾" 5¾" 11/2" 6" PL $\frac{3}{8}$ x 12 x 13 (WITH 4 - $1" \times 1\frac{1}{2}"$ SLOTTED 1'-5¹/₂"

C BASE PLATE AND POST

BASE PLATE DETAIL PLATE "D" DETAIL

HOLES FOR 7/8"Ø

BOLTS (A307).(TYP.) -

KEY NOTES:

- THREADED 3/4"Ø REDUCED WELD BASE STUD x 2" LONG WITH 1 PLATE WASHER "C", 1 LOCKWASHER AND 1 NUT. TIGHTEN TO FIRM CONTACT.
- \bigcirc 4 % "Ø H.S. ANCHOR BOLTS THREADED 5" MIN. WITH 2 NUTS AND FLATWASHERS.
- 3 RAIL SPLICE (TYP.) SEE "RAIL SPLICE DETAIL" ON DETAILS 2 SHEET.
- 4 S1 ♥#4 IN BRIDGE DECK PANEL, AS1 ♥#4 IN BRIDGE APPROACH SLAB.

山	FILE NAME BRIDGE DES. ENG.	073 OREGON 3 TUBE DTL 1.dgn					REGION NO.	STATE	П
뿛	BRIDGE DES. ENG.	Leland, AC) (A OLL	i
Ж	BRIDGE PROJ. ENG.						10	WASH	i
ĕ	SUPERVISOR DESIGNED BY	Aldrich, BS					JOB	NUMBER	i
盎	DESIGNED BY	Mizumori, A	02/23				23	Y005	i
	CHECKED BY	O'Neill, P	05/23					1005	i
	ENTERED BY	Reed, M	02/23				CONT	RACT NO.	i
	PRELIM. PLAN BY								i
쏬	ADCH / SDEC			DEVISION	DATE	DV			1

1"Ø HOLES) GALVANIZING

NOT REQUIRED.

ANCHOR PLATE DETAIL







I-90 VANTAGE BRIDGE - REPLACE BRIDGE DECK, SPECIAL REPAIRS & DRAINAGE PLAN REF NO

BA73

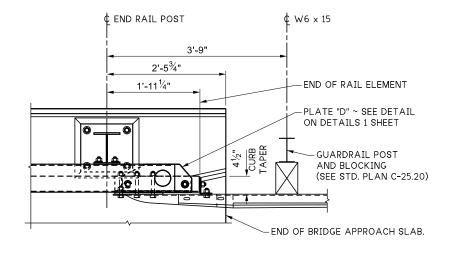
SHEET

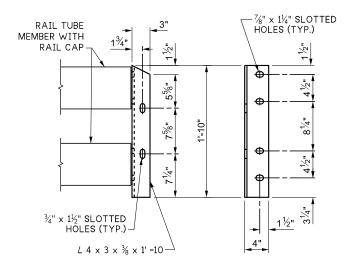
OF

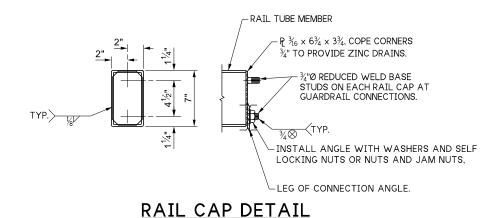
COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

BRIDGE RAILING TYPE OREGON 3-TUBE DETAILS 1 OF 4

PLOT DATE: 6/13/2023 PLOT TIME: 9:24:30 AM PLOTTED BY: ChurcC FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/073 OREGON 3 TUBE DTL 1.dgn

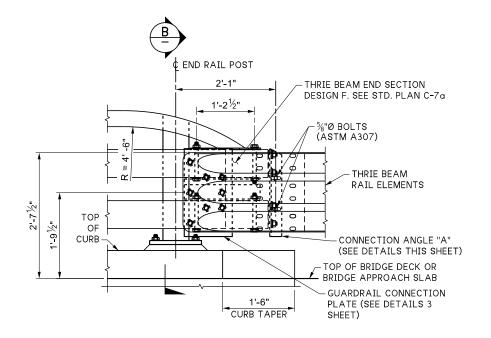


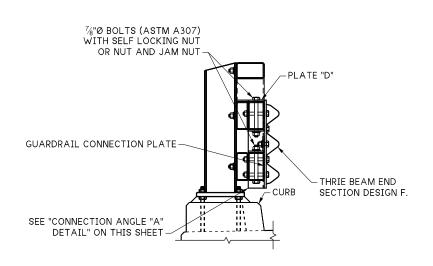


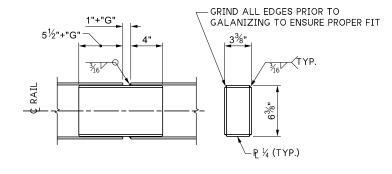


PLAN ~ TRANSITION CONNECTION TYPE I

CONNECTION ANGLE "A" DETAIL







SECTION B

RAIL SPLICE DETAIL SEE RAIL SPLICE GAP "G" TABLE THIS SHEET

ELEVATION ~ TRANSITION CONNECTION TYPE I

RAIL SPLIC	CE GAP "G"
TYPICAL SPLICE	0"
PIER 2, 3, 4, & 5	0"
SPAN 2 HINGE	4"
PIER 6 AND 9	5"
SPAN 6-9 FLOORBEAM	0"

- 1									
Ë	FILE NAME BRIDGE DES. ENG.	074 OREGON 3 TUBE DTL 2.dgn					REGION NO.	STATE	П
뿘	BRIDGE DES. ENG.	Leland, AC							i
Ж	BRIDGE PROJ. ENG.						10	WASH	i
ĕ	BRIDGE PROJ. ENG. SUPERVISOR DESIGNED BY	Aldrich, BS					JOB	NUMBER	i
器	DESIGNED BY	Mizumori, A	02/23				23Y005		
	CHECKED BY	O'Neill, P	05/23					1005	İ
	ENTERED BY	Reed, M	02/23				CONT	RACT NO.	i
	PRELIM. PLAN BY								ĺ
SR	ARCH. / SPEC.			REVISION	DATE	BY			ĺ







I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

PLAN REF NO

BA74

SHEET

OF

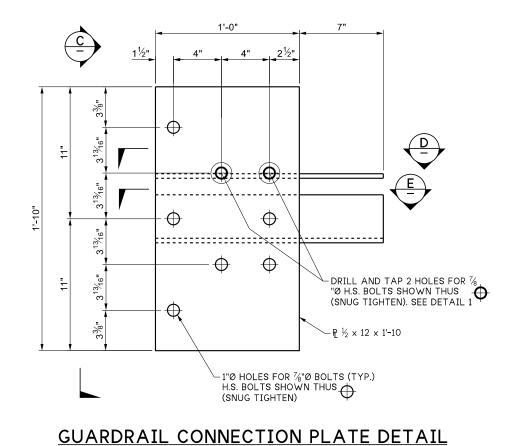
COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

BRIDGE RAILING TYPE OREGON 3-TUBE

DETAILS 2 OF 4

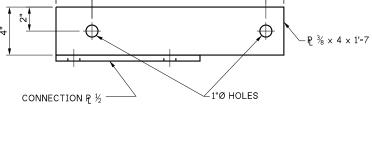
L 2.dgn

PLOT DATE: 6/12/2023 PLOT TIME: 3:13:41 PM PLOTTED BY: WrennMa FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/074 OREGON 3 TUBE DTL 2.dgn



— № 3% × 4 × 1'-7 ~L4 x 4 x 3/8 x 1'-7



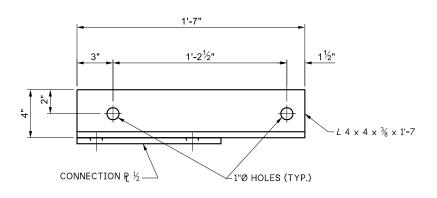


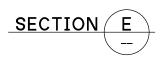
1'-7"

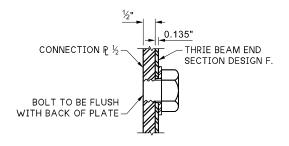
1'-2½"

1½"









DETAIL

ļ									
Щ	FILE NAME	075 OREGON 3 TUBE DTL 3.dgn					REGION NO.	STATE	
뿚	BRIDGE DES. ENG.	Leland, AC							
	BRIDGE PROJ. ENG.						10	WASH	
	SUPERVISOR	Aldrich, BS					JOB	NUMBER	
8	DESIGNED BY	Mizumori, A	02/23				23	Y005	
	CHECKED BY	O'Neill, P	05/23						
	ENTERED BY	Reed, M	02/23				CONT	RACT NO.	
	PRELIM. PLAN BY						l		
ß	ARCH. / SPEC.			REVISION	DATE	BY			







I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

PLAN REF NO

BA75

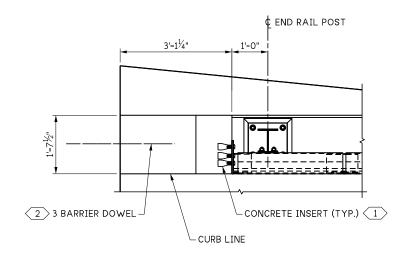
SHEET

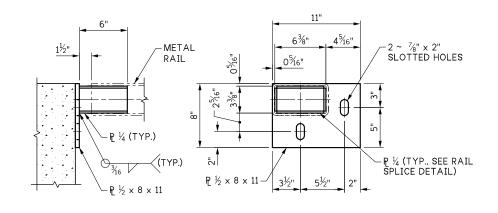
117 OF 166

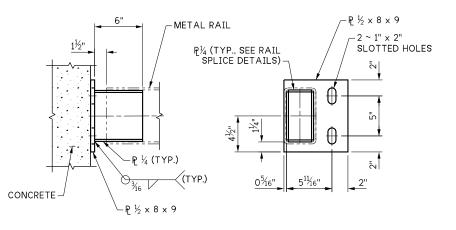
COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180 BRIDGE RAILING TYPE OREGON 3-TUBE

DETAILS 3 OF 4

PLOT DATE: 6/12/2023 PLOT TIME: 3:12:40 PM PLOTTED BY: WrennMa FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/075 OREGON 3 TUBE DTL 3.dgn



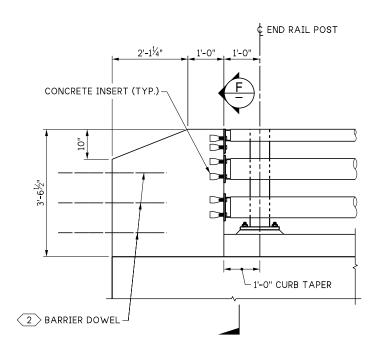


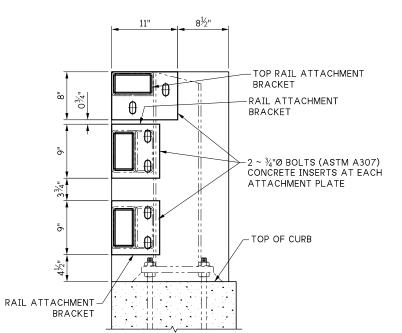


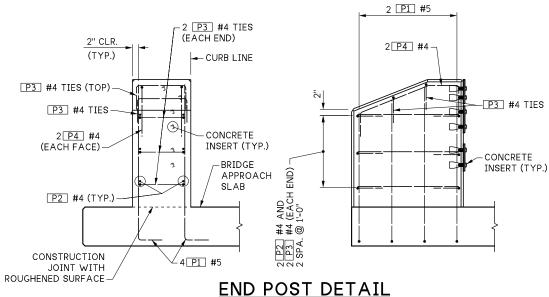
PLAN ~ TRANSITION CONNECTION TYPE II

TOP RAIL ATTACHMENT BRACKET

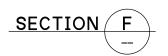
RAIL ATTACHMENT BRACKET







ELEVATION ~ TRANSITION CONNECTION TYPE II



KEY NOTES:

- 1 CONCRETE INSERTS SHALL BE HOT DIP GALVANIZED EXPANDED COIL INSERTS WITH CLOSED BACK FERRULES THREADED FOR ¾"Ø ASTM A 307 BOLTS. THE MINIMUM INSERT LENGTH IS 4½". THE MINIMUM SAFE WORKING LOAD IN TENSION IS 4000 LBS.
- 2 BARRIER DOWELS (EMBEDDED), SEE SHEET "BRIDGE BARRIER TYPE F TRANSITION DETAILS 1"

BEND DIAGRAM	
ALL DIMENSIONS ARE OUT TO OUT	
1'-3½" 2'-1½ 50 112°	
P3 #4 P4 #4	

Ħ	FILE NAME	076 OREGON 3 TUBE DT	L 4.dgn				REGION NO.	STATE	
罴	BRIDGE DES. ENG.	Leland, AC							i
	BRIDGE PROJ. ENG.						10	WASH	ı
ĕ	SUPERVISOR	Aldrich, BS					JOB	NUMBER	ı
8	DESIGNED BY	Mizumori, A	02/23				23	Y005	ı
	CHECKED BY	O'Neill, P	05/23]	1005	ı
	ENTERED BY	Wrenn, M.	02/23				CONT	RACT NO.	ı
	PRELIM. PLAN BY								ı
Ŗ	ARCH / SPEC			REVISION	DATE	BY			i





L	I-90
EXE	VANTAGE BRIDGE - REPLACE BRIDGE
	DECK, SPECIAL REPAIRS & DRAINAGE
	COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180
4	

BRIDGE RAILING TYPE OREGON 3-TUBE

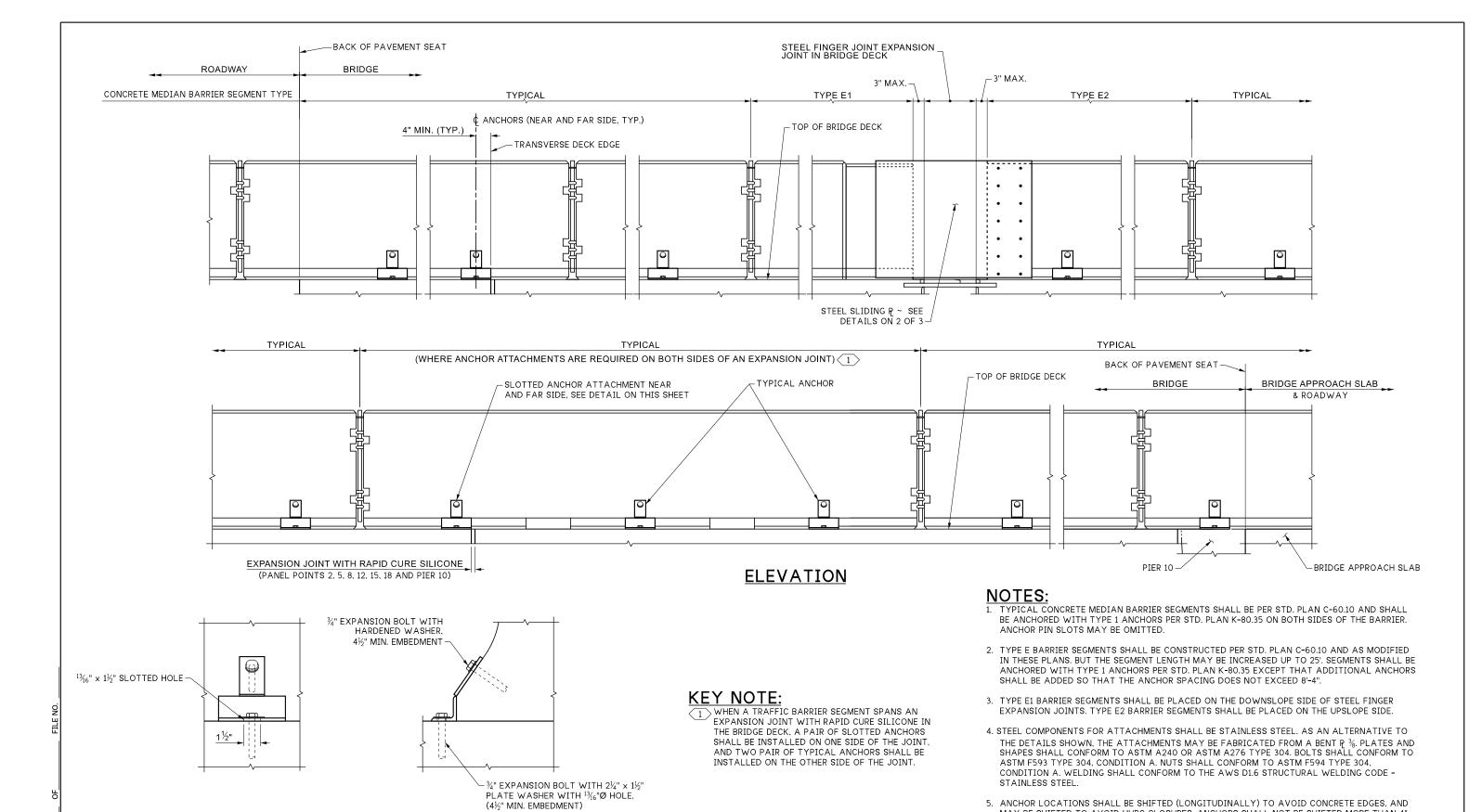
DETAILS 4 OF 4

PLAN REF NO

BA76

SHEET 118 OF

PLOT DATE: 6/12/2023 PLOT TIME: 3:11:50 PM PLOTTED BY: WrennMa FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/076 OREGON 3 TUBE DTL 4.dgn



SLOTTED ANCHOR ATTACHEMENT DETAIL

PLOT DATE: 6/12/2023 PLOT TIME: 3:09:56 PM

FILE NAME 077 MEDIAN BARRIER 1.dqn BRIDGE DES. ENG. Leland, AC WASH 10 BRIDGE PROJ. ENG. JOB NUMBER SUPERVISOR Aldrich BS DESIGNED BY 02/23 23Y005 CHECKED BY O'Neill, P 05/23 FNTFRFD BY McCarthy, DJ 02/23 PRELIM. PLAN BY G ARCH. / SPEC. REVISION DATE BY

WSDOT

SEE SHEET CT1 DATE



I-90 VANTAGE BRIDGE - REPLACE BRIDGE DECK, SPECIAL REPAIRS & DRAINAGE

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

PLAN REF NO

BA77

SHEET

OF

CONCRETE MEDIAN BARRIER DETAILS 1 OF 3

PLOTTED BY: WrennMa FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/077 MEDIAN BARRIER 1

MAY BE SHIFTED TO AVOID UHPC CLOSURES. ANCHORS SHALL NOT BE SHIFTED MORE THAN 4".

6. GLARE SCREEN SHALL BE PROVIDED.

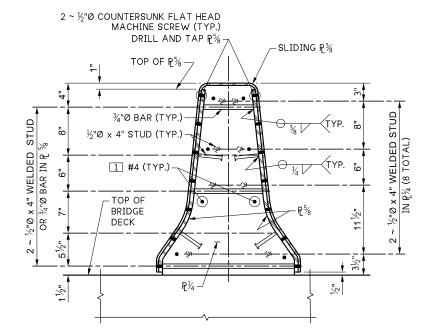
SLIDING PLATE NOTES:

- 1 ALL DADDIED DI ATEC CHALL DE AACHTO MIO
- PLATES MAY BE BENT TO SHAPE OR WELDED AT THE FABRICATION DISCRETION. IF WELDING IS USED, FILL ALL CORNERS WITH WELD AND GRIND TO FIT MATING PLATES.
- 3. ALL BOLTS SHALL BE ASTM F-593 TYPE 304 STAINLESS STEEL.
- 4. PROVIDE ROUNDING ON ALL EXPOSED PLATE EDGES.
- ALL BARRIER PLATES SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M111 AFTER FABRICATION.
- 6. AFTER GALVANIZING, SLIDING PLATES SHALL BE PAINTED TO MATCH CONCRETE SURFACE.

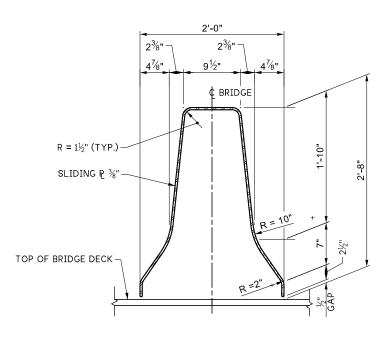
KEY NOTE:

BARRIER SPACING
JOINT NEAR PIER 3: 1'-8"

JOINT NEAR PIER 3: 1-8 JOINTS AT PIERS 6 AND 9 MATCH WIDTH OF STEEL FINGER EXPANSION JOINT IN DECK









- 1									
ᇤ	FILE NAME BRIDGE DES. ENG.	078 MEDIAN BARRIER 2.dgn					REGION NO.	STATE	
뿘	BRIDGE DES. ENG.	Leland, AC							
띘	BRIDGE PROJ. ENG.						10	WASH	
ĕ	BRIDGE PROJ. ENG. SUPERVISOR DESIGNED BY	Aldrich, BS					JOB	NUMBER	
쁊	DESIGNED BY	Mizumori, A	02/23				23.	Y005	
	CHECKED BY	O'Neill, P	05/23						
	ENTERED BY	McCarthy, DJ	02/23				CONT	RACT NO.	
	PRELIM. PLAN BY								
R	ARCH. / SPEC.			REVISION	DATE	BY			







I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

PLAN REF NO

BA78

SHEET

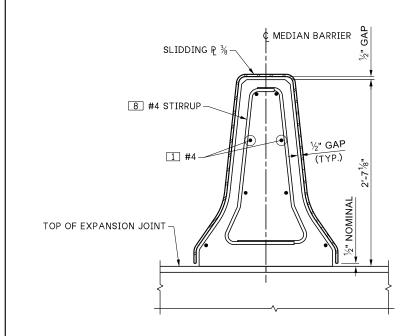
OF

SHEETS

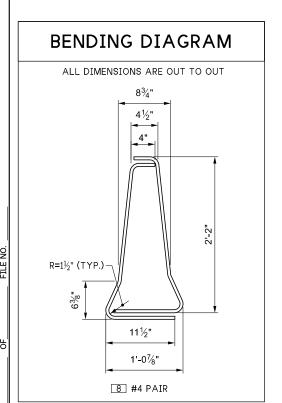
COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

CONCRETE MEDIAN BARRIER
DETAILS 2 OF 3

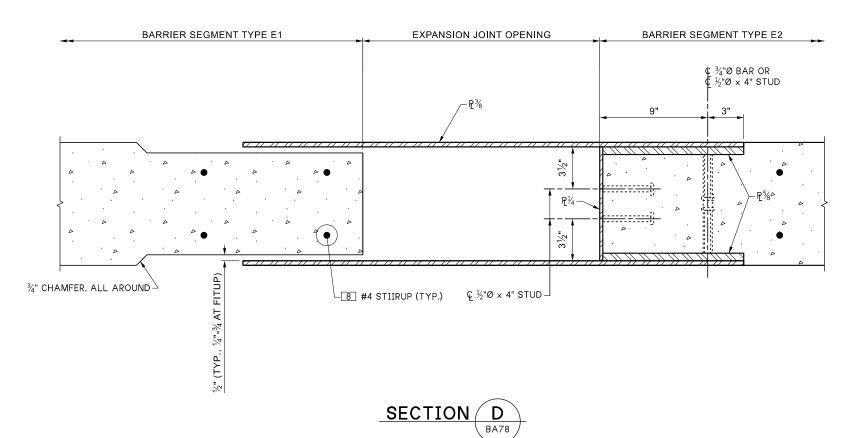
PLOT DATE: 6/12/2023 PLOT TIME: 3:09:10 PM PLOTTED BY: WrennMa FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/078 MEDIAN BARRIER 2



SECTION C



PLOT DATE: 6/12/2023 PLOT TIME: 3:08:17 PM



REINFORCEMENT NOT SHOWN FOR CLARITY.

ᇤ	FILE NAME	079 MEDIAN BARRIER 3.dgn					REGION NO.	STATE	
뿛	FILE NAME BRIDGE DES. ENG.	Leland, AC) . (A OL I	
ij	BRIDGE PROJ. ENG.						10	WASH] ;
BRID	SUPERVISOR DESIGNED BY	Aldrich, BS					JOB NUMBER		
	DESIGNED BY	Mizumori, A	02/23				23Y005		
	CHECKED BY	O'Neill, P	05/23						
	ENTERED BY	McCarthy, DJ	02/23				CONT	RACT NO.	
	PRELIM. PLAN BY								
SR	ARCH. / SPEC.			REVISION	DATE	BY			





I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

PLAN REF NO

BA79

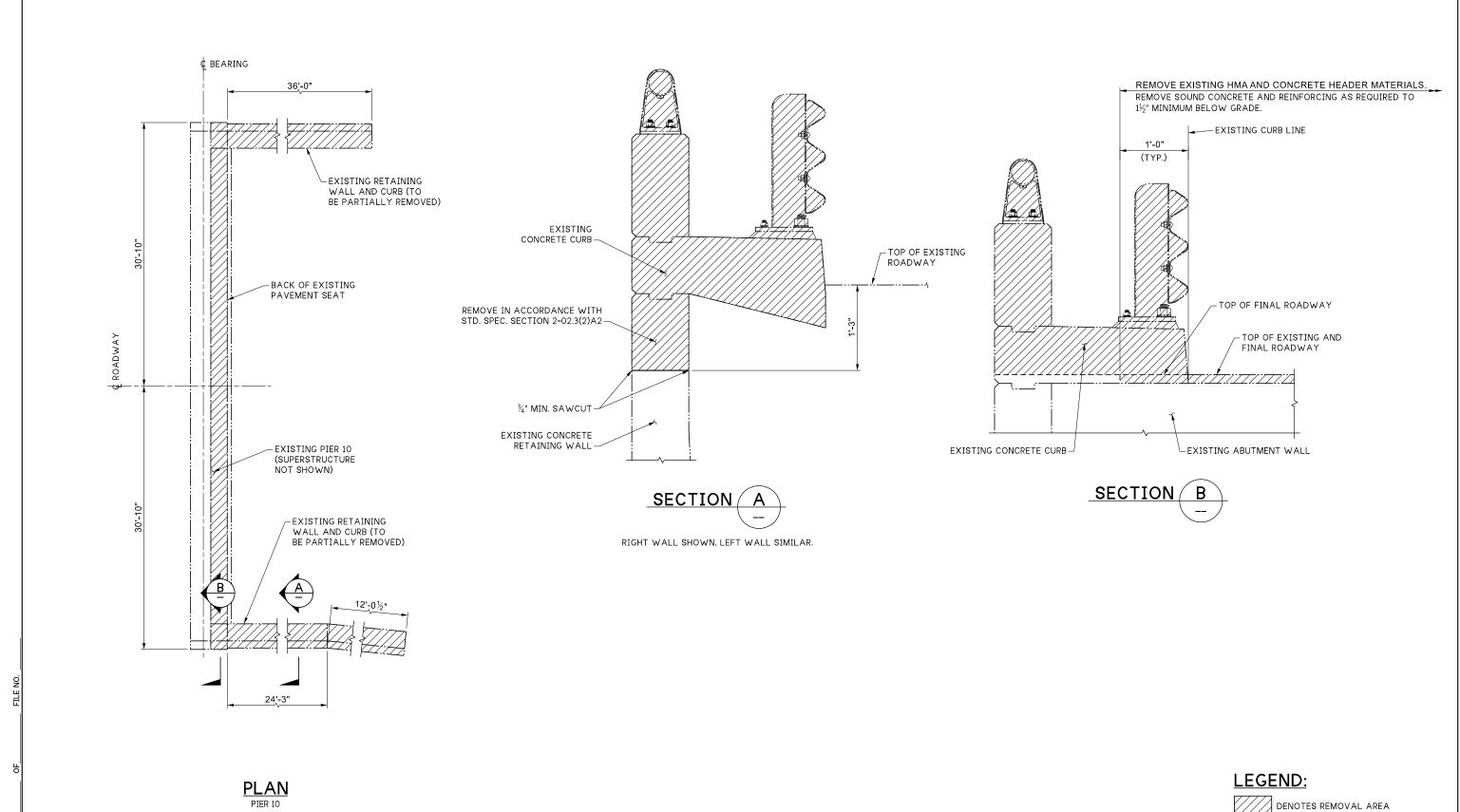
SHEET

121 OF 166

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

CONCRETE MEDIAN BARRIER
DETAILS 3 OF 3

PLOTTED BY: WrennMa FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/079 MEDIAN BARRIER 3



PLAN REF NO

BA80

SHEET

122 OF 166

- 1									
Ë	FILE NAME BRIDGE DES. ENG.	080 BR APPROACH SLAB REMOVAL.dgn							
뿛	BRIDGE DES. ENG.	Leland, AC					NO.		
Ж	BRIDGE PROJ. ENG.						10	WASH	1 (
ĕ	SUPERVISOR DESIGNED BY	Aldrich, BS					JOB	NUMBER	Ι'
#	DESIGNED BY	Mitchell, A	02/23				23	Y005	
	CHECKED BY	Mizumori, A	05/23] -	1005	
	ENTERED BY	Wrenn, M.	02/23				CONT	RACT NO.	
	PRELIM. PLAN BY								l
SS	ARCH / SPEC			REVISION	DATE	BY	1		i





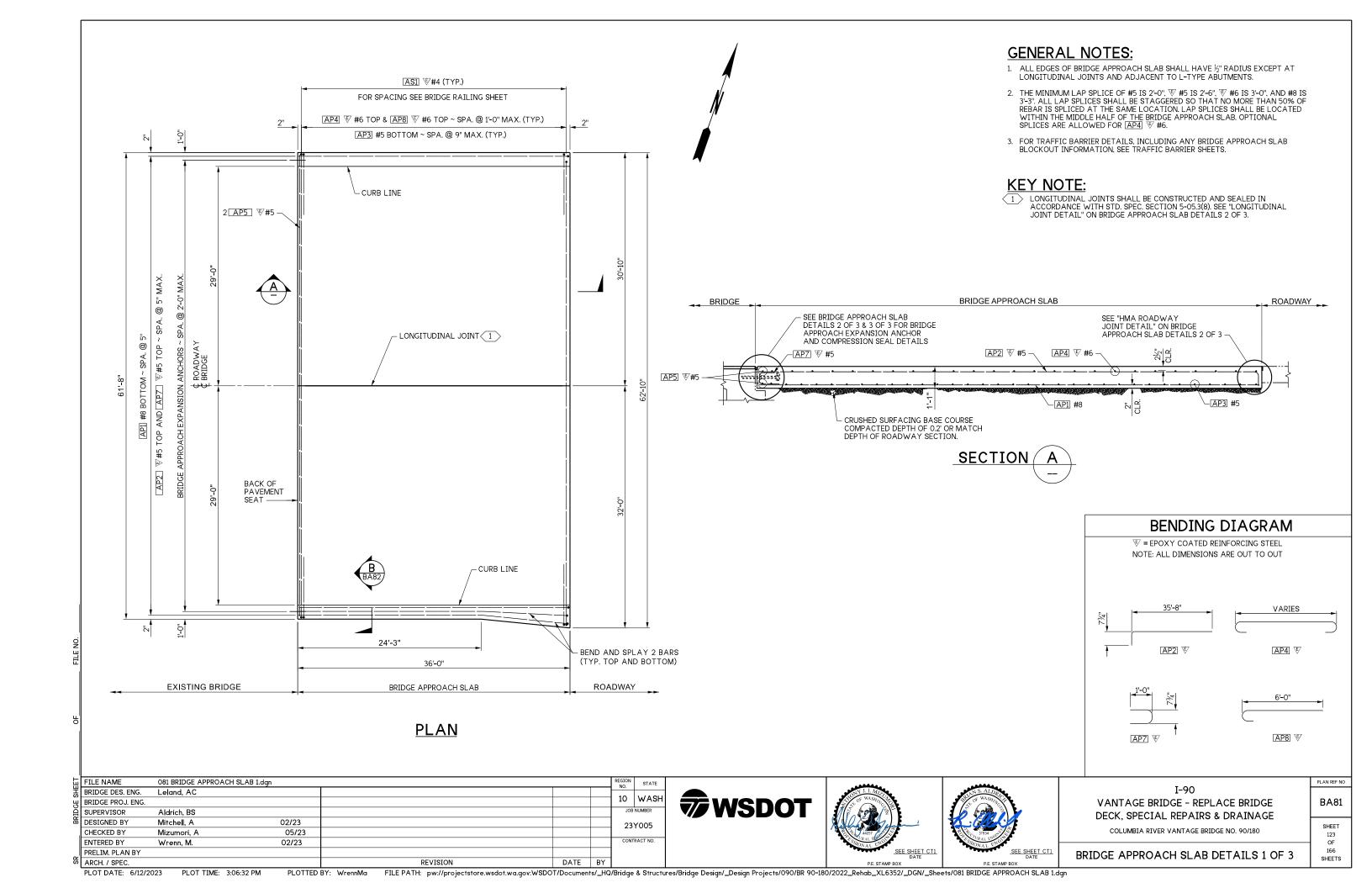


I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

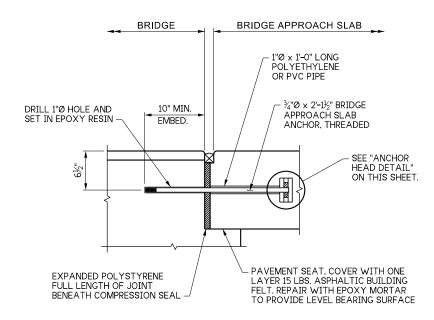
COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

PIER 10 REMOVAL DETAILS

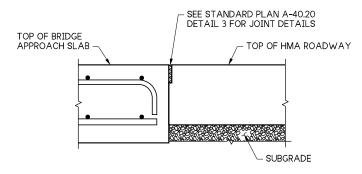
PLOT DATE: 6/12/2023 PLOT TIME: 3:07:24 PM PLOTTED BY: WrennMa FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/080 BR APPROACH SLAB REMOVAL.dgn



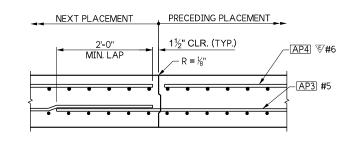
SEE BRIDGE RAILING SHEETS FOR DETAILS NOT SHOWN.



APPROACH EXPANSION ANCHOR

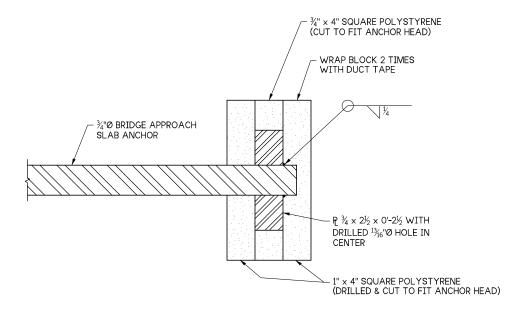


HMA ROADWAY JOINT DETAIL



LONGITUDINAL JOINT DETAIL

EDGE PRECEDING PLACEMENT ONLY WITH 1/8" RADIUS. LAP SPLICE MAY BE REPLACED WITH A MECHANICAL COUPLER.



ANCHOR HEAD DETAIL

NOTES:

- 1. ALL METAL PARTS OF THE APPROACH EXPANSION ANCHOR SHALL RECEIVE ONE COAT OF PAINT CONFORMING TO STANDARD SPECIFICATION SECTION 9-08.1(2)F OR BE GALVANIZED IN ACCORDANCE WITH AASHTO M 232.
- 2. BRIDGE APPROACH SLAB ANCHORS SHALL BE INSTALLED PARALLEL TO ROADWAY AND TO EACH OTHER.

- 1										
ᇤ	FILE NAME 082 BRIDGE APPROACH SLAB 2.dqn							STATE		
뿛	FILE NAME BRIDGE DES. ENG.	Leland, AC					NO.			
삤	BRIDGE PROJ. ENG.						10	WASH		
ĕ	BRIDGE PROJ. ENG. SUPERVISOR DESIGNED BY	Aldrich, BS					JOB	NUMBER		
띪	DESIGNED BY	Mitchell, A	02/23				23Y005			
	CHECKED BY	Mizumori, A	05/23] -	1003		
	ENTERED BY	Wrenn, M.	02/23				CONT	RACT NO.		
	PRELIM. PLAN BY						1			
ß	ARCH. / SPEC.			REVISION	DATE	BY	1			







I-90 VANTAGE BRIDGE - REPLACE BRIDGE DECK, SPECIAL REPAIRS & DRAINAGE

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

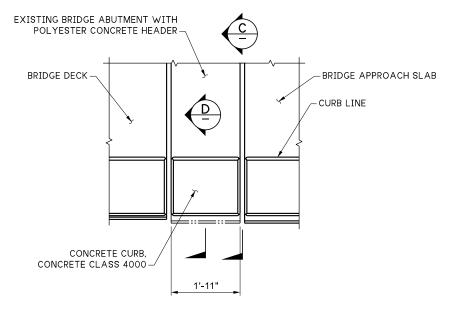
BRIDGE APPROACH SLAB DETAILS 2 OF 3

PLAN REF NO

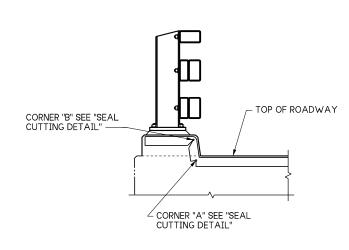
BA82

SHEET

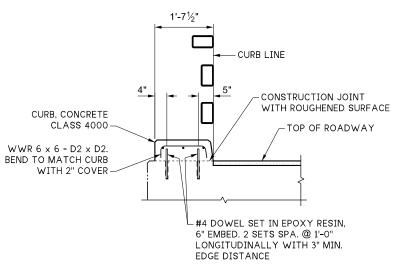
PLOT DATE: 6/12/2023 PLOT TIME: 3:02:55 PM PLOTTED BY: WrennMa FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/082 BRIDGE APPROACH SLAB 2.dgn



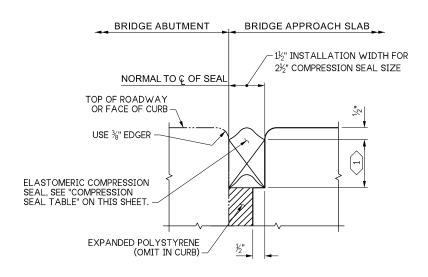
PLAN - EXPANSION JOINT



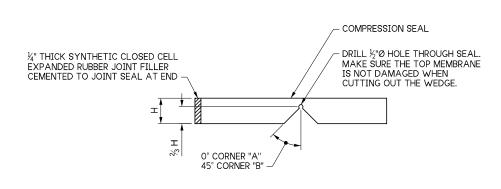








COMPRESSION SEAL DETAIL
EXPANSION JOINT AT BACK OF PAVEMENT SEAT



SEAL CUTTING DETAIL

CC	OMPRESSION	SEAL TAB	LE			
D.S. BF	ROWN	WATSON BOWMAN ACME				
SEAL	WIDTH	SEAL	WIDTH			
CV-2502	21/2	WA-250	2⅓			

TEST IN ACCORDANCE WITH ASTM D 2628 PRIOR TO USE.

KEY NOTE:

1 FULLY COMPRESSED SEAL HEIGHT, SEAL HEIGHT VARIES WITH MANUFACTURER, VERIFY PRIOR TO SLAB CONSTRUCTION.

ᇤ	FILE NAME BRIDGE DES. ENG.	083 BRIDGE APPROACH SLAB 3.dgn							
뛺	BRIDGE DES. ENG.	Leland, AC					NO.) . (A OL I	l
삤	BRIDGE PROJ. ENG.						10	WASH	l
ĕ	SUPERVISOR DESIGNED BY	Aldrich, BS				JOB NUM		NUMBER	l
뛺	DESIGNED BY	Mitchell, A	02/23				23Y005		l
	CHECKED BY	Mizumori, A	05/23					1005	l
	ENTERED BY	Wrenn, M.	02/23				CONT	RACT NO.	l
	PRELIM. PLAN BY								l
띯	ARCH. / SPEC.			REVISION	DATE	BY			







I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

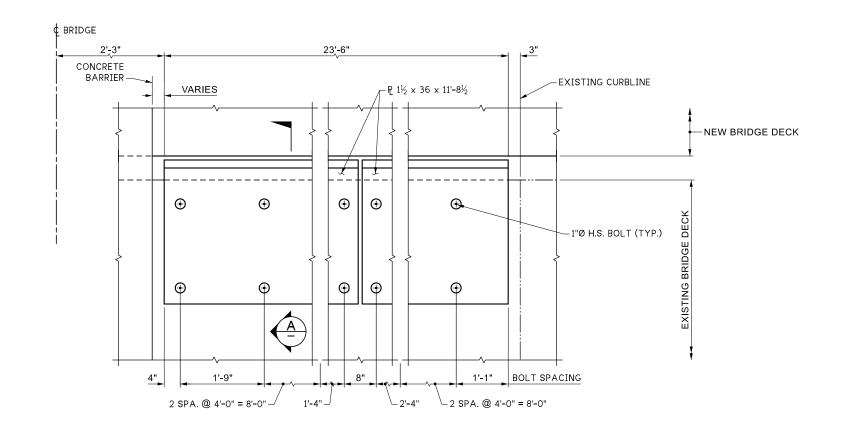
BRIDGE APPROACH SLAB DETAILS 3 OF 3

PLAN REF NO

BA83

SHEET

PLOT DATE: 6/12/2023 PLOT TIME: 3:02:11 PM PLOTTED BY: WrennMa FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/083 BRIDGE APPROACH SLAB 3.dgn



PLAN TEMPORARY GRADE TRANSITION TYPE 1

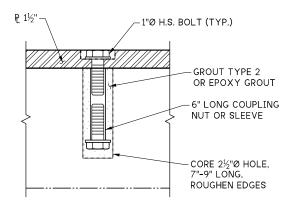
SPANS 1-5 & 9 EXCEPT AT PIERS

GRIND INLAY TRANSITION P 1½ × 36 -RAMP MATERIAL ¾" MAX. DEPTH-(3/4" MIN. THICK) 1'-9" EXISTING BRIDGE DECK - NEW BRIDGE DECK PANEL 1¼"Ø HOLES WITH 1"±½"_ 3/4" x 3"Ø COUNTERBORE -BEVEL ½" x 2" ¾" SAWCUT 50 MIN. CORE 11/4"Ø HOLE (TYP.) -1"Ø H.S. BOLT WITH LOCK NUT AND LEVELING MORTAR (FILL WHEEL RUTS 3"Ø x ½" P WASHER, SNUG TIGHT, SEE ALTERNATE BOLT DETAIL (TYP.) AND SET PLATE TO MATCH GRADE OF NEW BRIDGE DECK PANEL (+0" / -3%"))-

SECTION

TEMPORARY GRADE TRANSITION NOTES

- PROVIDE TEMPORARY GRADE TRANSITION WHEN TRAFFIC CROSSES BETWEEN EXISTING AND NEW BRIDGE DECK. INTERFACE SELECT TYPE 1 OR TYPE 2 BASED ON LOCATIONS NOTED IN THE PLANS.
- 2. STRUCTURAL STEEL AND HARDWARE SHALL BE GALVANIZED.
- 3. WELDING OF STEEL PLATES SHALL BE PER AWS D1.1 STRUCTURAL WELDING CODE.
- 4. THE TOP OF STEEL PLATES SHALL HAVE NON-SKID COATING USING VEHICLE GRADE DIRECT-TO-METAL EPOXY WITH A NOMINAL COEFFICIENT OF FRICTION OF 0.35. THE EPOXY COLOR SHALL BE ORANGE, GRAY OR BLACK.
- 5. THE STEEL PLATE MAY BE WET SET ON THE LEVELING MORTAR. THE STEEL PLATE SHALL BE IN CONTACT WITH THE DECK AND MORTAR OVER AT LEAST 75% OF IT'S AREA.
- 6. SECURE STEEL PLATES FROM LATERAL MOVEMENTS AND VERTICAL VIBRATION WHILE IN USE. SECURE PLATES AGAINST DISPLACEMENT BY USING ADJUSTABLE CLEATS, SHIMS, OR OTHER DEVICES
- 7. RAMP MATERIAL SHALL BE POLYESTER CONCRETE, ELASTOMERIC CONCRETE, OR UREFAST.
- 8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTION AND MAINTENANCE OF STEEL PLATES AND RAMP MATERIAL AS NECESSARY TO ENSURE SAFE CONTINUOUS OPERATION.
- 9. EXISTING STEEL REINFORCEMENT IN THE DECK SHALL BE LOCATED PRIOR TO CORE DRILLING, AND THE PLATE SHALL BE LOCATED TO MINIMIZE DAMAGE TO EXISTING REINFORCEMENT.



ALTERNATE BOLT DETAIL

USE ALTERNATE BOLT DETAIL WHEN AN OBSTRUCTION UNDER THE EXISTING BRIDGE DECK INTERFERES WITH A THROUGH-BOLT.

ļ									
ᇤ	FILE NAME BRIDGE DES. ENG.	FILE NAME 084 STEEL PLATE DETAIL 1.dgn						STATE	
뿘	BRIDGE DES. ENG.	Leland, AC					NO.		1 4
끯	BRIDGE PROJ. ENG.						10	WASH	
ĕ	BRIDGE PROJ. ENG. SUPERVISOR DESIGNED BY	Aldrich, BS					JOB	NUMBER	١,
쁊	DESIGNED BY	Mizumori, A	02/23				23.	Y005	
	CHECKED BY	O'Neill, P	05/23					1005	
	ENTERED BY	Brutzman, N	02/23				CONT	RACT NO.	
	PRELIM. PLAN BY								
ß	ARCH. / SPEC.			REVISION	DATE	BY			







I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

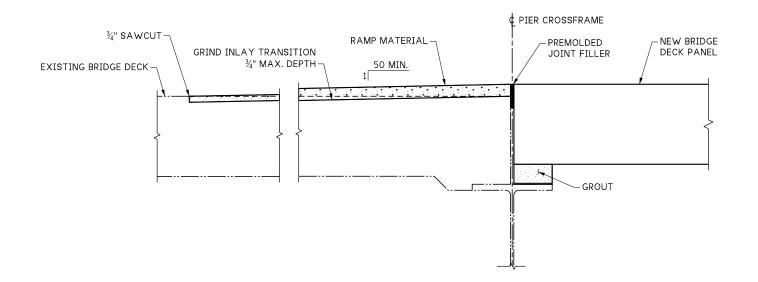
COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

TEMPORARY GRADE TRANSITION
DETAILS 1 OF 2

PLOT DATE: 6/12/2023 PLOT TIME: 2:59:56 PM PLOTTED BY: WrennMa FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/084 STEEL PLATE DETAIL 1.dgn

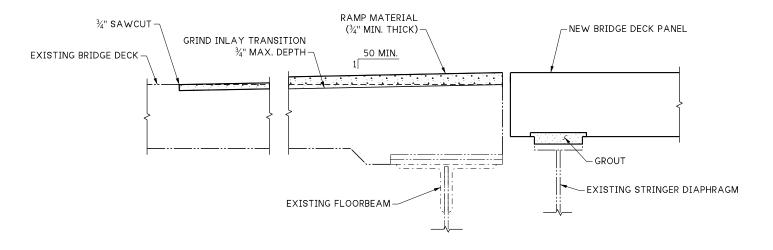
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OF



SECTION - TEMPORARY GRADE TRANSITION TYPE 2A

SHOWN AT PIERS 2-5



SECTION - TEMPORARY GRADE TRANSITION TYPE 2B

SHOWN FOR PANEL POINTS 2, 5, 8, 12, 15 & 18 IN SPANS 6-8 SIMILAR IF PLACING PANELS FROM WEST TO EAST.

I									
ᇤ	FILE NAME BRIDGE DES. ENG.	085 STEEL PLATE D	5 STEEL PLATE DETAIL 2.dgn						
뿘	BRIDGE DES. ENG.	Leland, AC							i .
Ж	BRIDGE PROJ. ENG.						10	WASH	1
ĕ	SUPERVISOR DESIGNED BY	Aldrich, BS					JOB	NUMBER	١ '
æ	DESIGNED BY	Mizumori, A	02/23				23	Y005	
	CHECKED BY	O'Neill, P	05/23] -	. 003	
	ENTERED BY	Brutzman, N	02/23				CONT	RACT NO.	1
	PRELIM. PLAN BY]		
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I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

PLAN REF NO

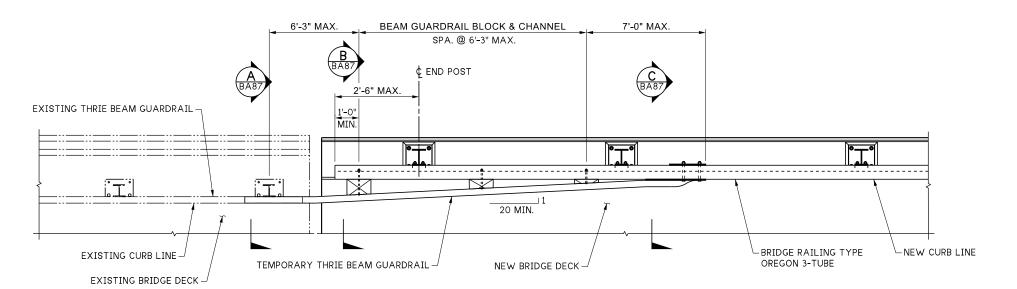
BA85

127 OF 166

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

TEMPORARY GRADE TRANSITION
DETAILS 2 OF 2

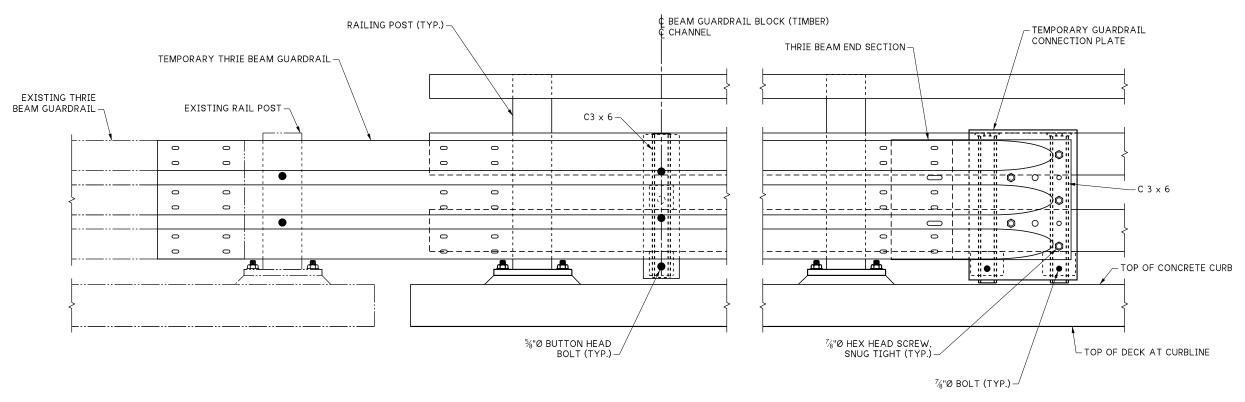
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PLAN TEMPORARY BARRIER TRANSITION

NOTES:

- 1. GUARDRAIL BLOCKS SHALL BE 6" WIDE WITH BOLTS CENTERED HORIZONTALLY ON THEM. ALL WOOD DIMENSIONS GIVEN IN THE PLANS ARE ACTUAL, NOT NOMINAL. SEE STD. PLAN C-1b FOR ADDITIONAL DETAILS.
- THRIE BEAM END SECTIONS SHALL BE DESIGN F. SEE STD. PLAN C-7a FOR ADDITIONAL DETAILS.
- 3. NUTS SHALL BE NYLON-INSERT LOCK NUTS, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- 4. ADJUST ELEVATION OF GUARDRAIL TO ACCOUNT FOR GRADE DIFFERENTIAL BETWEEN EXISTING AND NEW DECK.
- 5. REPAIR BRIDGE RAIL PAINT AFTER TRANSITION REMOVAL, AS NEEDED.
- 6. IN CASES WHERE DESIGN F END SECTION IS LAPPED ON THE OUTSIDE OF THE GUARDRAIL, A GALVANIZED 1" OD, 0.134" THICK, NARROW TYPE A PLAIN WASHER OR AN ANCHOR RAIL WASHER WILL BE PLACED UNDER THE SPLICE BOLT HEADS.



ELEVATION - PARTIAL

ᇤ	FILE NAME BRIDGE DES. ENG.	086 TEMPORARY BARRIER TRANSITION 1.dgn							
뿛	BRIDGE DES. ENG.	Leland, AC					NO.		4
띯	BRIDGE PROJ. ENG.						10	WASH	-
ĕ	BRIDGE PROJ. ENG. SUPERVISOR DESIGNED BY	Aldrich, BS					JOB	NUMBER	•
æ	DESIGNED BY	Mizumori, A	02/23				23	Y005	
	CHECKED BY	O'Neill, P	05/23] -~	1005	
	ENTERED BY	Reed, M	02/23				CONT	RACT NO.	
	PRELIM. PLAN BY						1		
Ŗ	ARCH. / SPEC.			REVISION	DATE	BY]		







I-90 VANTAGE BRIDGE - REPLACE BRIDGE DECK, SPECIAL REPAIRS & DRAINAGE PLAN REF NO

BA86

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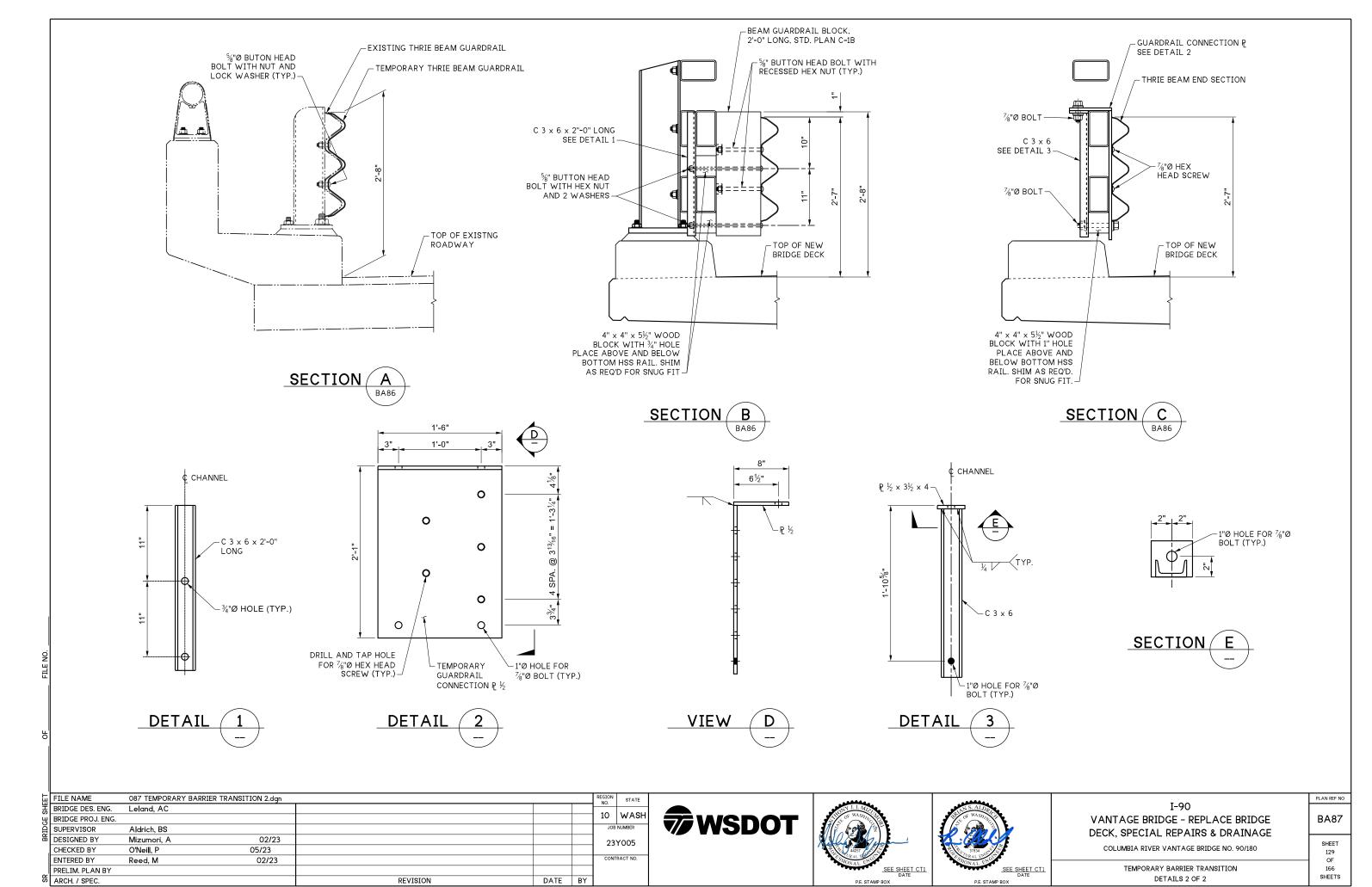
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COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

TEMPORARY BARRIER TRANSITION
DETAILS 1 OF 2

PLOT DATE: 6/12/2023 PLOT TIME: 2:57:40 PM PLOTTED BY: WrennMa FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/086 TEMPORARY BARRIER TRANSITION 1.dgn



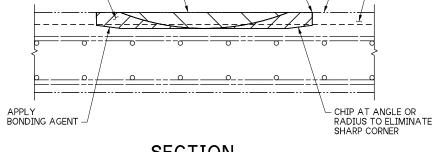
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PLAN CONCRETE DECK PATCH REPAIR

CONCRETE DECK PATCH REPAIR NOTES

- 1. PROVIDE CONCRETE DECK PATCH REPAIR IN ACCORDANCE WITH THE SPECIAL PROVISIONS AS DIRECTED BY THE ENGINEER.

 IF THE ACCESS OR SCHEDULE DOES NOT ALLOW FOR INSTALLATION OF A CONCRETE DECK REPAIR PATCH, THE ENGINEER MAY SPECIFY A STEEL PLATE DECK PATCH REPAIR.
- 2. BRIDGE DECK REPAIR MATERIAL SHALL CONFORM TO THE FOLLOWING: PATCHING MATERIAL FOR CONCRETE STRUCTURE REPAIR (SECTION 9-20.2) OR MORTAR TYPE 3 FOR CONCRETE REPAIR (9-20.4(4)). FOR TYPE 2 AND 3 REPAIRS, EXPANSION JOINT HEADER CONCRETE MAY BE USED (SEE SPECIAL PROVISIONS). FOLLOW ALL MANUFACTURER RECOMMENDATIONS FOR PREPACKAGED PRODUCTS.
- 3. REMOVE ALL LOOSE AND UNSOUND CONCRETE IN THE REPAIR AREA. AVOID DAMAGING THE EXISTING REBAR. ALSO REMOVE ALL OLD PATCH MATERIAL WITHIN THE REPAIR LIMITS.
- 4. ONCE LIMITS OF REPAIR AREA HAVE BEEN ESTABLISHED, SAW-CUT THE BOUNDARIES AND REMOVE CONCRETE TO THE REPAIR LIMITS. SAW CUTS SHALL NOT EXCEED 3/4 INCH IN DEPTH OR TO THE TOP MAT OF REBAR. SAWCUT EDGES OF PATCH SHALL BE IN SOUND CONCRETE FREE OF DELAMINATIONS.
- 5. EDGES OF REPAIR AREA SHOULD BE APPROXIMATELY VERTICAL.
- 6. PROVIDE A 3/4-INCH MINIMUM CLEARANCE AROUND ALL EXPOSED REBAR WITHIN THE LIMITS OF THE REPAIR.
- 7. FOR ANY REBAR WITH MORE THAN 20% SECTION LOSS OR IF A BAR IS SEVERED, SPLICE ADDITIONAL REBAR TO BOTH SIDES OF CORRODED OR BROKEN SECTION, USING LAP SPLICES OR MECHANICAL SPLICES. NEW OR ADDITIONAL REBAR SHALL BE THE SAME SIZE AS ORIGINAL REBAR.
- 8. IF NOT ENOUGH REBAR LENGTH EXISTS FOR 24" MINIMUM LAP SPLICE, MECHANICAL SPLICES SHALL BE USED. CHOOSE APPROPRIATE MECHANICAL SPLICE TO MAXIMIZE CONCRETE COVER. INSTALL ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. MECHANICAL SPLICES SHALL CONFORM TO STANDARD SPECIFICATION 6-02.3(24)F.
- 9. SURFACE PREPARATION SHALL FOLLOW ALL MANUFACTURER RECOMMENDATIONS, INCLUDING THE USE OF BONDING AGENTS. WHERE BONDING AGENTS ARE NOT SPECIFIED, THE DECK CONCRETE SHALL BE SATURATED-SURFACE-DRY.
- 10. MAINTAIN A CONTINUOUS WET CURE FOR 24 HOURS, OR UNTIL THE REPAIR AREA ATTAINS A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI BEFORE OPENING TO LIVE TRAFFIC



¾" SAWCUT (TYP.)

TOP OF DECK

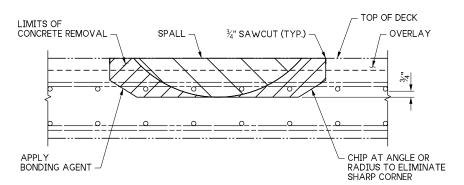
OVERLAY

SECTION TYPE 1 REPAIR SHALLOW SPALL

LIMITS OF

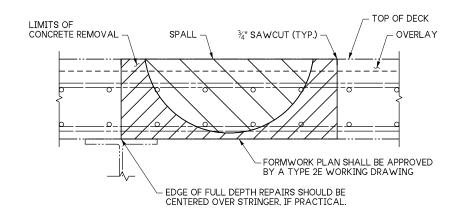
CONCRETE REMOVAL

FOR USE WHEN NO REINFORCING IS EXPOSED.



SECTION TYPE 2 REPAIR INTERMEDIATE SPALL

FOR USE WHEN TOP MAT REINFORCING IS EXPOSED.



SECTION TYPE 3 REPAIR DEEP SPALL

FOR USE WHEN BOTTOM MAT REINFORCING US EXPOSED.

ᇤ	FILE NAME BRIDGE DES. ENG.	088 DECK PATCHING 1.dgn					REGION NO.	STATE	
뛺	BRIDGE DES. ENG.	Leland, AC							1
띯	BRIDGE PROJ. ENG.						10	WASH	
ĕ	SUPERVISOR DESIGNED BY	Aldrich, BS					JOB	NUMBER	
盎	DESIGNED BY	Mizumori, A	02/23				23	Y005	
	CHECKED BY	O'Neill, P	05/23					1005	
	ENTERED BY	Brutzman, N	02/23				CONT	RACT NO.	
	PRELIM. PLAN BY								
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I-90 VANTAGE BRIDGE - REPLACE BRIDGE DECK, SPECIAL REPAIRS & DRAINAGE PLAN REF NO

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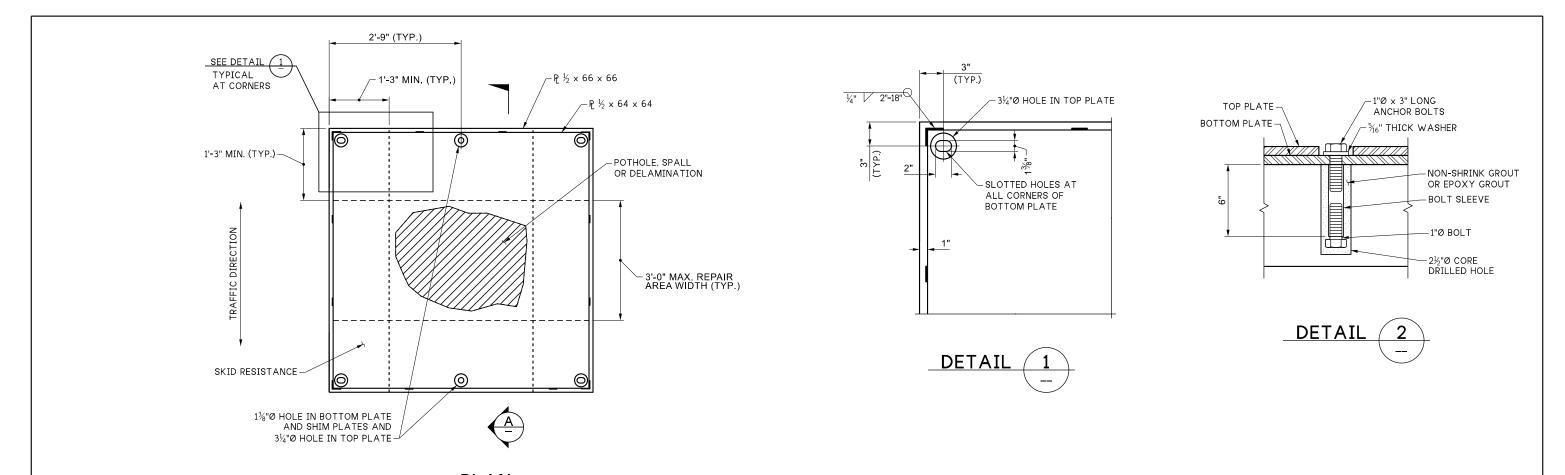
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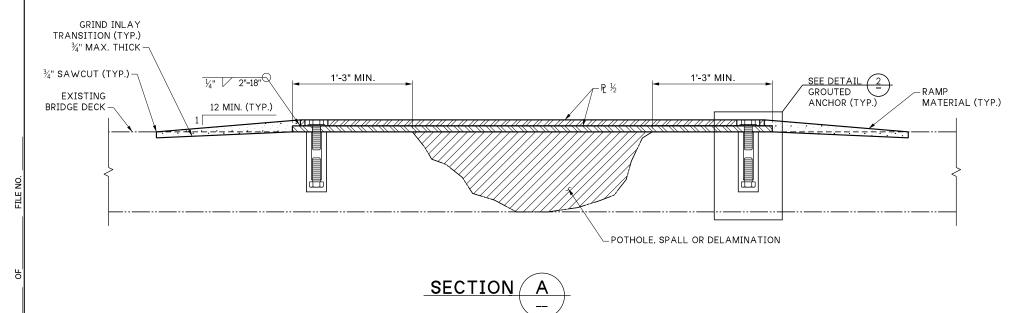
COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

DECK PATCHING DETAILS 1 OF 2

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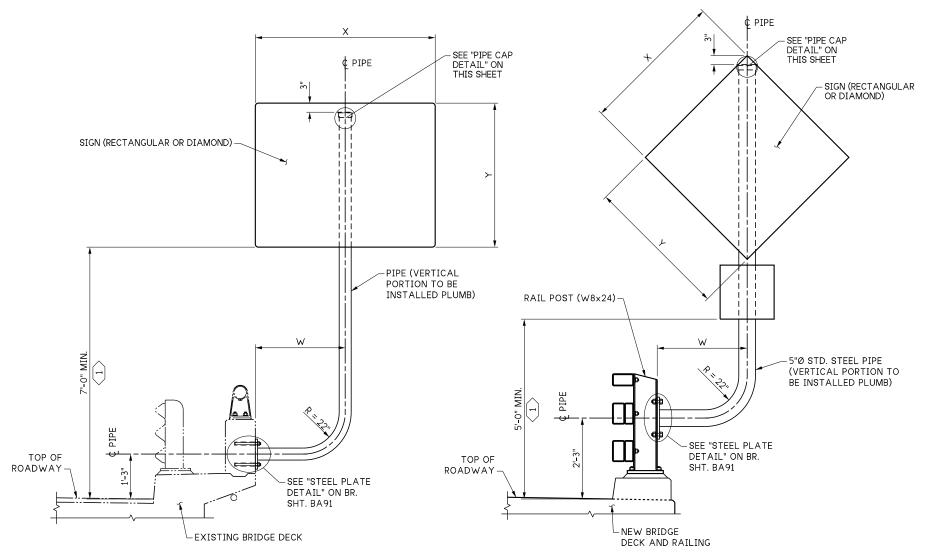
PLAN STEEL PLATE DECK PATCH REPAIR



STEEL PLATE DECK PATCH REPAIR NOTES

- PROVIDE STEEL PLATE DECK PATCH REPAIR AS DIRECTED BY THE ENGINEER WHEN TRAFFIC CROSSES A DAMAGED AREA OF THE EXISTING DECK AND A CONCRETE PATCH IS NOT SPECIFIED.
- 2. STRUCTURAL STEEL AND HARDWARE SHALL BE GALVANIZED.
- 3. WELDING OF STEEL PLATES SHALL BE PER AWS D1.1 STRUCTURAL WELDING CODE.
- 4. THE TOP OF STEEL PLATES SHALL HAVE A NON-SKID COATING USING VEHICLE GRADE DIRECT-TO-METAL EPOXY WITH A NOMINAL COEFFICIENT OF FRICTION OF 0.35 OR HIGHER. THE EPOXY COLOR SHALL BE ORANGE, GRAY OR BLACK.
- 5. ANCHORAGE SYSTEM SHALL BE REMOVED WHEN STEEL PLATES ARE REMOVED.
- SECURE STEEL PLATES FROM LATERAL MOVEMENTS AND VERTICAL VIBRATION WHILE IN USE. SECURE PLATES AGAINST DISPLACEMENT BY USING ADJUSTABLE CLEATS, SHIMS, OR OTHER DEVICES.
- 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTION AND MAINTENANCE OF STEEL PLATES AND RAMP MATERIAL AS NECESSARY TO ENSURE SAFE CONTINUOUS OPERATION.
- 8. STEEL PLATE DECK PATCH REPAIRS SHALL BE REPLACED WITH EITHER A CONCRETE DECK PATCH REPAIR OR A NEW BRIDGE DECK PANEL AS SOON AS THE TRAFFIC CONFIGURATION ALLOWS ACCESS TO PERFORM THE WORK.
- 9. THE INLAY TRANSITION GRIND MAY BE OMITTED WITH THE APPROVAL OF THE ENGINEER.

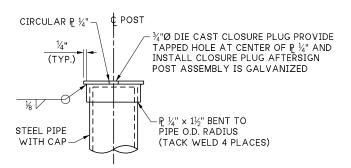
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SUPERVISOR Ale	ldrich, BS		JOB NUMBER	T VI VYSDU I			DECK, SPECIAL REPAIRS & DRAINAGE	
DESIGNED BY Miz	izumori, A 02/2	3	23Y005	_	W. W. Salani			SHEET
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BARRIER MOUNTED ELBOW SIGN SUPPORT

SEE STANDARD PLAN G-26.10

THE SHAPE AND NUMBER OF SIGNS SHOWN ARE FOR REFERENCE ONLY. OTHER COMBINATIONS MAY BE SPECIFIED, SEE CIVIL PLANS.



PIPE CAP DETAIL

NOTES:

- 1. SIGN SUPPORT COMPONENTS HAVE BEEN DESIGNED TO MEET THE REQUIREMENTS OF AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, DATED 2015 AND INTERIM'S, USING BASIC WIND SPEED OF 115 MPH, AND 50 YEAR DESIGN LIFE.
- 2. ALL NON-STAINLESS STEEL PARTS SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M111 AFTER FABRICATION. BOLTS AND HARDWARE SHALL BE GALVANIZED IN ACCORDANCE
- 3. SIZE OF FILLET WELD SHALL BE 1/4" (IN) MINIMUM EXCEPT WHERE NOTED
- 4. FOR SIGN BRACING DETAILS, SEE STANDARD PLAN G-30.10 OR G-50.10.
- 5. ROTATE SIGN ON POST TO BE NORMAL TO TRAFFIC.
- 6. NO RESIN BONDED ANCHORS SHALL BE NEARER THAN 1' 6" FROM A VERTICAL EXPANSION JOINT AND ALL RESIN BONDED ANCHORS SHALL CLEAR ANY EMBEDDED ELECTRICAL CONDUIT.
- 7. SIGN SUPPORT SHALL BE INSTALLED ON EXISTING CAST-IN-PLACE CONCRETE BARRIERS OR NEW BRIDGE RAILING TYPE OREGON 3-TUBE, SEE SIGN PLANS.
- 8. ANCHORS SHALL BE BOLTED INTO REINFORCED CONCRETE ONLY WITH A NOMINAL THICKNESS NO LESS THAN 9" (IN). BASE PLATE SHALL BE INSTALLED SUCH THAT FULL BEARING CONTACT IS ACHIEVED.
- 9. DRILLING THROUGH REINFORCING STEEL IS NOT ALLOWED. IF STEEL IS HIT WHILE DRILLING, THE LOCATION SHALL BE MOVED AND THE HOLE ABANDONED. FILL HOLE WITH GROUT CONFORMING TO STANDARD SPECIFICATION, SECTION 6.02.3(20).

KEY NOTE:

1 HEIGHT MAY VARY, SUBJECT TO XYZ LIMITS. SEE STD. PLAN G-26.10 FOR SAMPLE CALCULATIONS OF XYZ.

PIPE SIZE	XYZ	W
4" STD.	< 160 FT. ³	< 2'-6"
4" X-S	< 220 FT. ³	< 2'-6"
5" STD.	< 260 FT. ³	< 3'-6"

PART	MATERIAL SPECIFICATION
PLATES AND BARS	ASTM A36 OR ASTM 572
PIPES	EQUIVALENT HSS ASTM A500 ROUND GRADE B ASTM A53 GRADE B TYPE E OR S, OR
RESIN BONDED ANCHORS	ASTM F1554 GRADE 55 GALVANIZED
NUTS	ASTM A563 GRADE A
WASHERS	ASTM F436 TYPE 1
EPOXY RESIN	STD. SPEC. SECT. 9-26.1 (TYPE IV)
H.S. BOLT	STD. SPEC. SECT. 9-06.5(3)

- 1									
ᇤ	FILE NAME BRIDGE DES. ENG.	090 TEMP SIGN A	TTACHMENT 1.dgn				REGION NO.	STATE	
뿘	BRIDGE DES. ENG.	Leland, AC							
끯	BRIDGE PROJ. ENG.						10	WASH	
ĕ	BRIDGE PROJ. ENG. SUPERVISOR DESIGNED BY	Aldrich, BS					JOB	NUMBER	
쁊	DESIGNED BY	Mitchell, A	05/23				23	Y005	
	CHECKED BY	Marion, C	06/23] -	1005	
	ENTERED BY	Brutzman, N	02/23				CONT	RACT NO.	
	PRELIM. PLAN BY								
Ŗ	ARCH. / SPEC.			REVISION	DATE	BY			







I-90 VANTAGE BRIDGE - REPLACE BRIDGE DECK, SPECIAL REPAIRS & DRAINAGE COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

> TEMPORARY SIGN ATTACHMENT DETAILS 1 OF 2

FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/090 TEMP SIGN ATTACHMENT 1

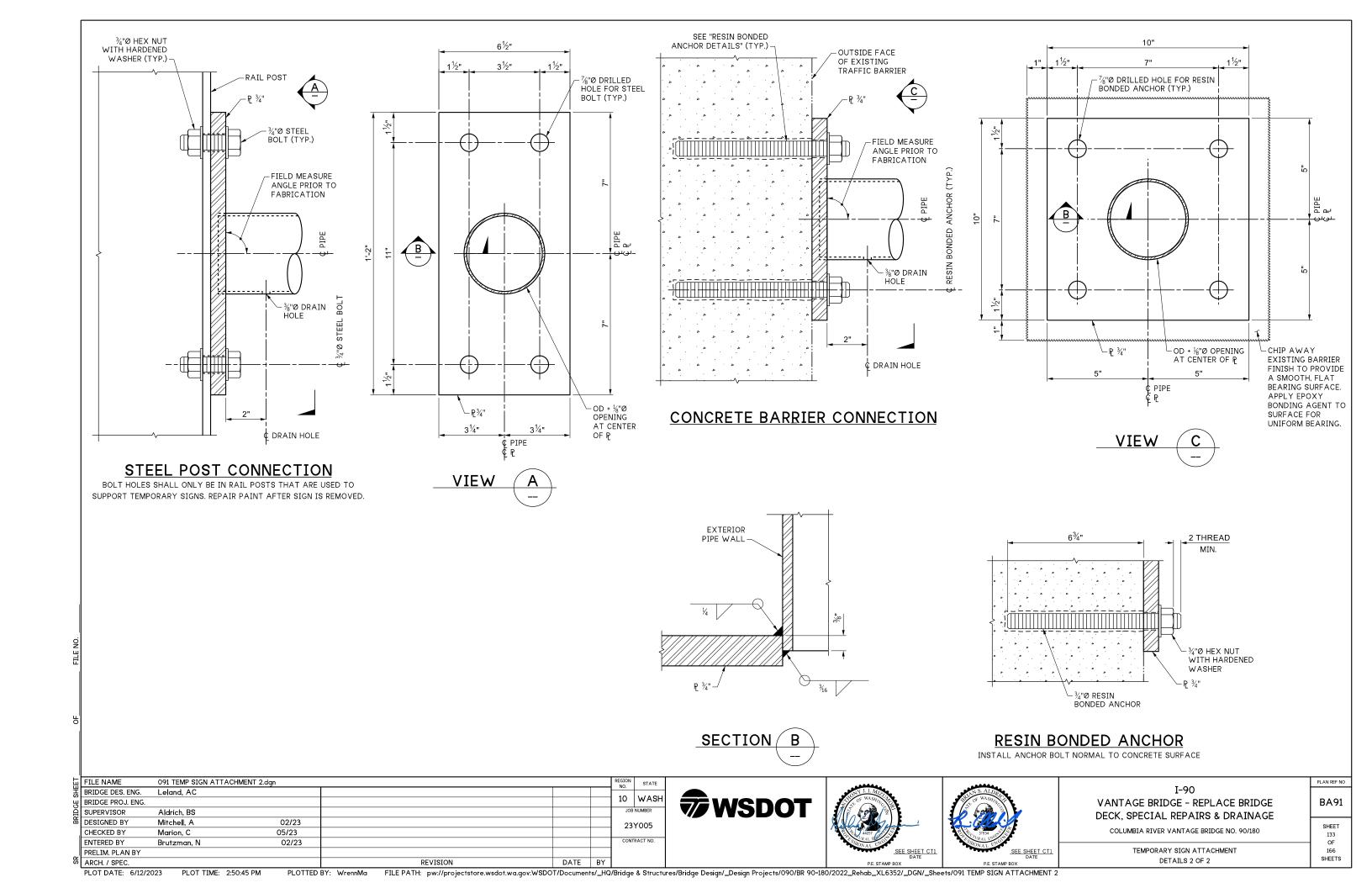
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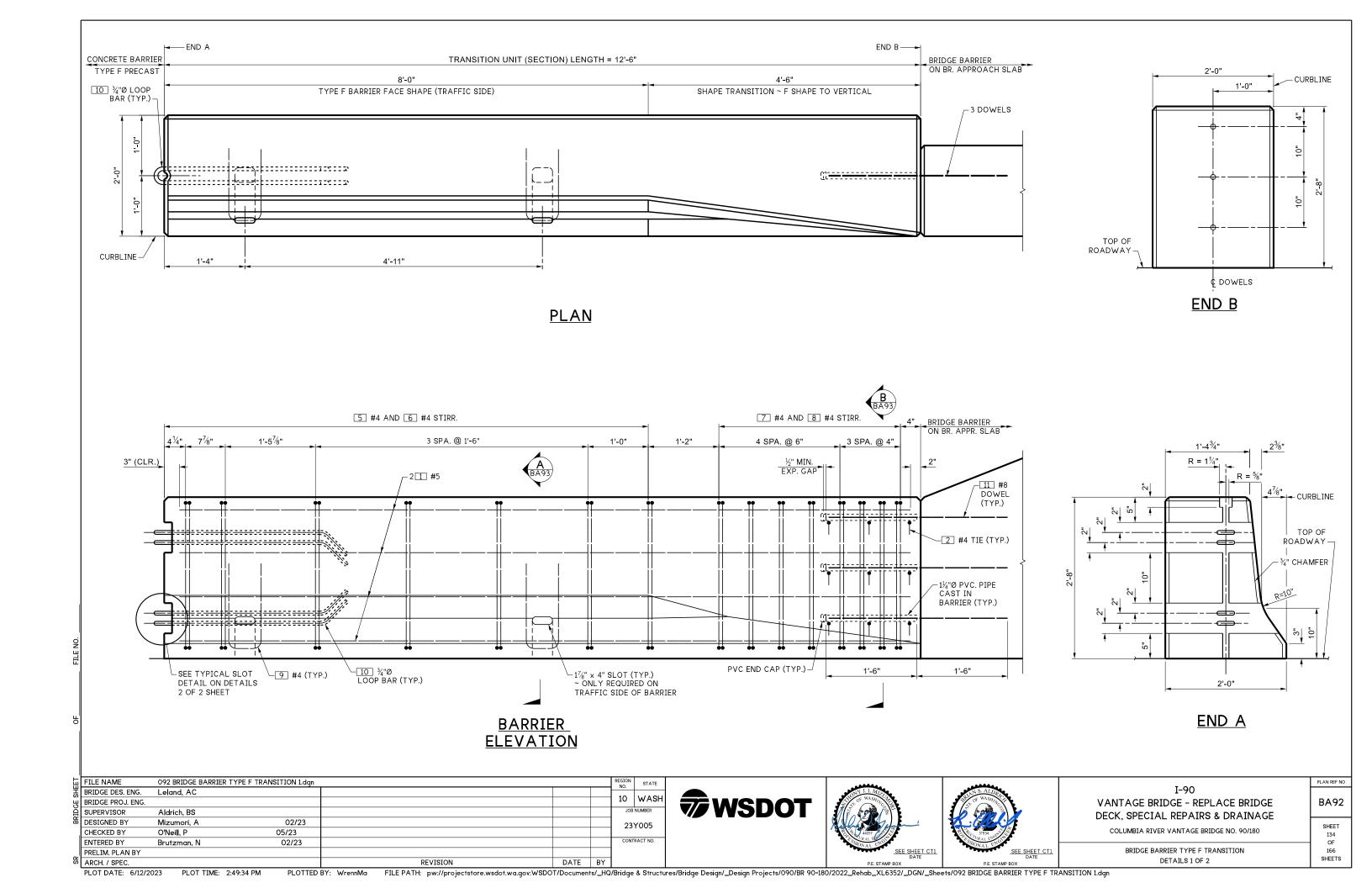
PLAN REF NO

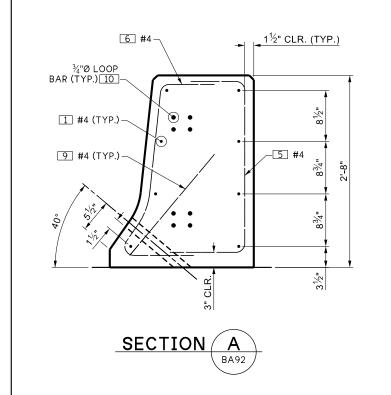
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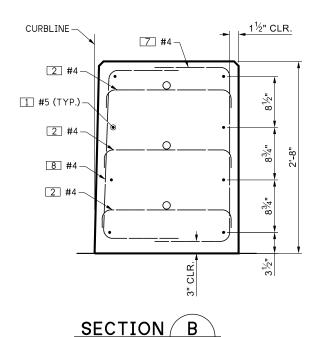
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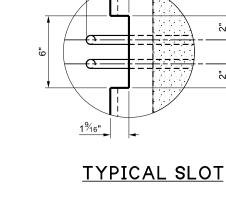






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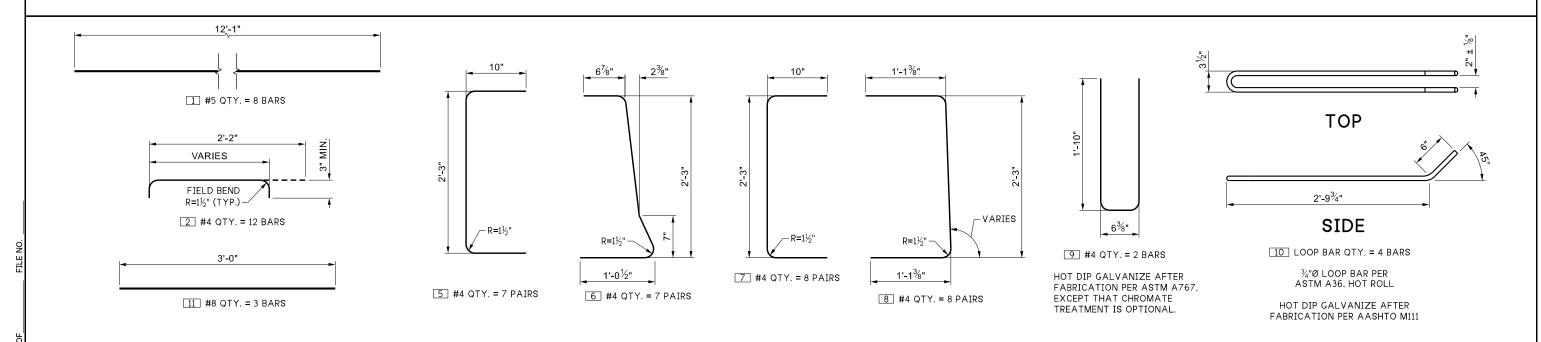


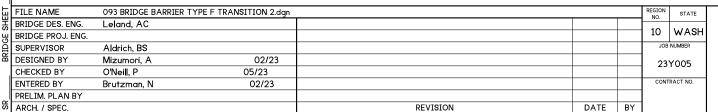
2" CLEAR (TYP.)

NOTES:

- 1. CONCRETE SHALL BE CLASS 4000.
- 2. PROVIDE 2" MINIMUM CONCRETE COVER OVER REINFORCING STEEL EXCEPT FOR AREAS NOTED IN PLANS.
- 3. SEE STD. PLAN C-60.50 FOR CONNECTING PIN AND CONNECTION
- 4. REMOVE SLACK BETWEEN BARRIER SEGMENTS AFTER INSERTING CONNECTING PIN.
- 5. SEE STANDARD PLAN C-60.10 FOR BARRIER TRANSITION ANCHORING DETAILS. SEE STD. PLAN C-60.10 AND C-60.70 FOR ANCHORING TYPE F BARRIER ADJACENT TO THE TRANSITION.
- 6. MEASUREMENT AND PAYMENT AS CONCRETE BARRIER (LINEAR FOOT).

BENDING DIAGRAM











I-90 VANTAGE BRIDGE - REPLACE BRIDGE DECK, SPECIAL REPAIRS & DRAINAGE

COLUMBIA RIVER VANTAGE BRIDGE NO. 90/180

BRIDGE BARRIER TYPE F TRANSITION
DETAILS 2 OF 2

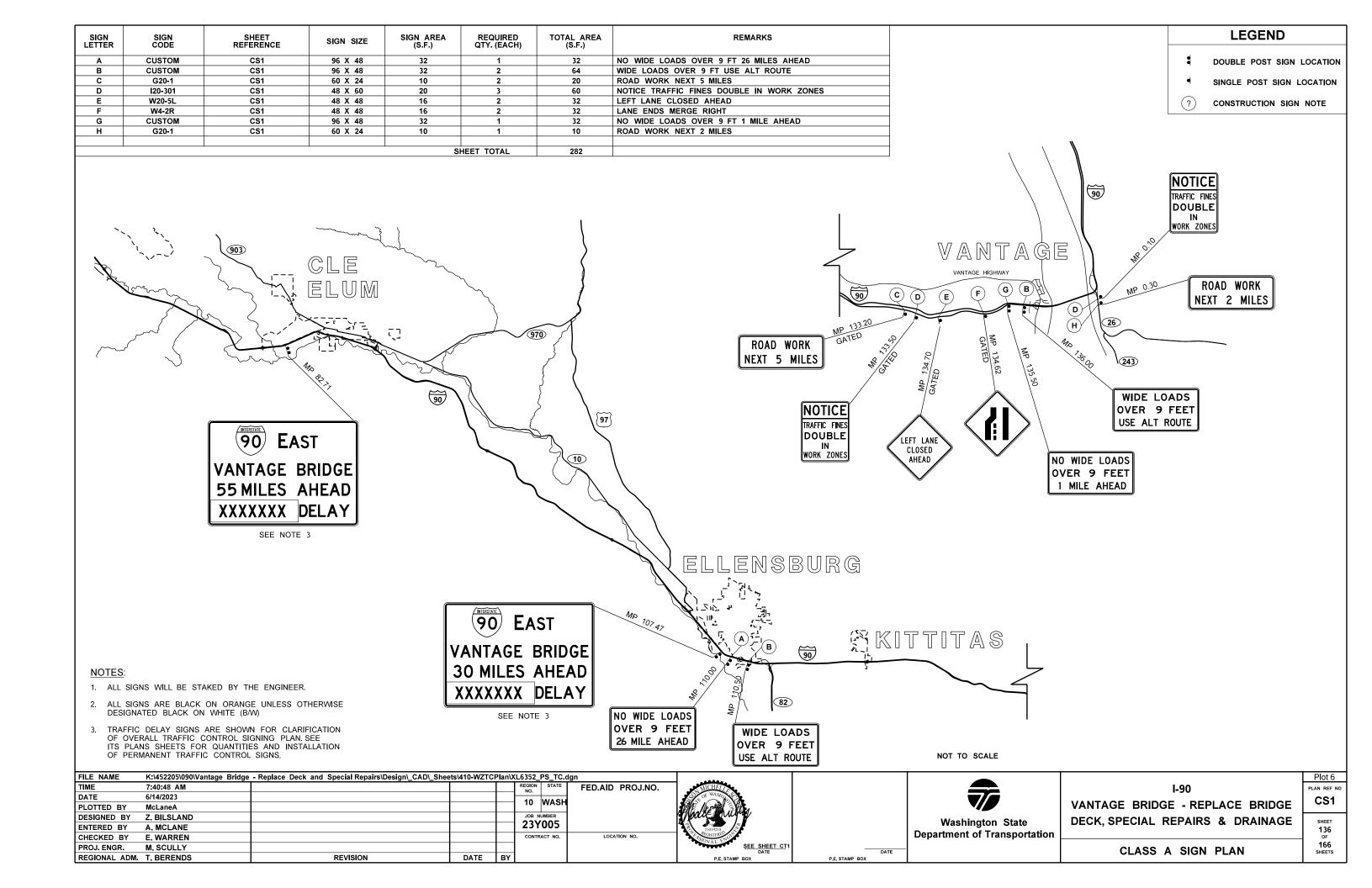
PLAN REF NO

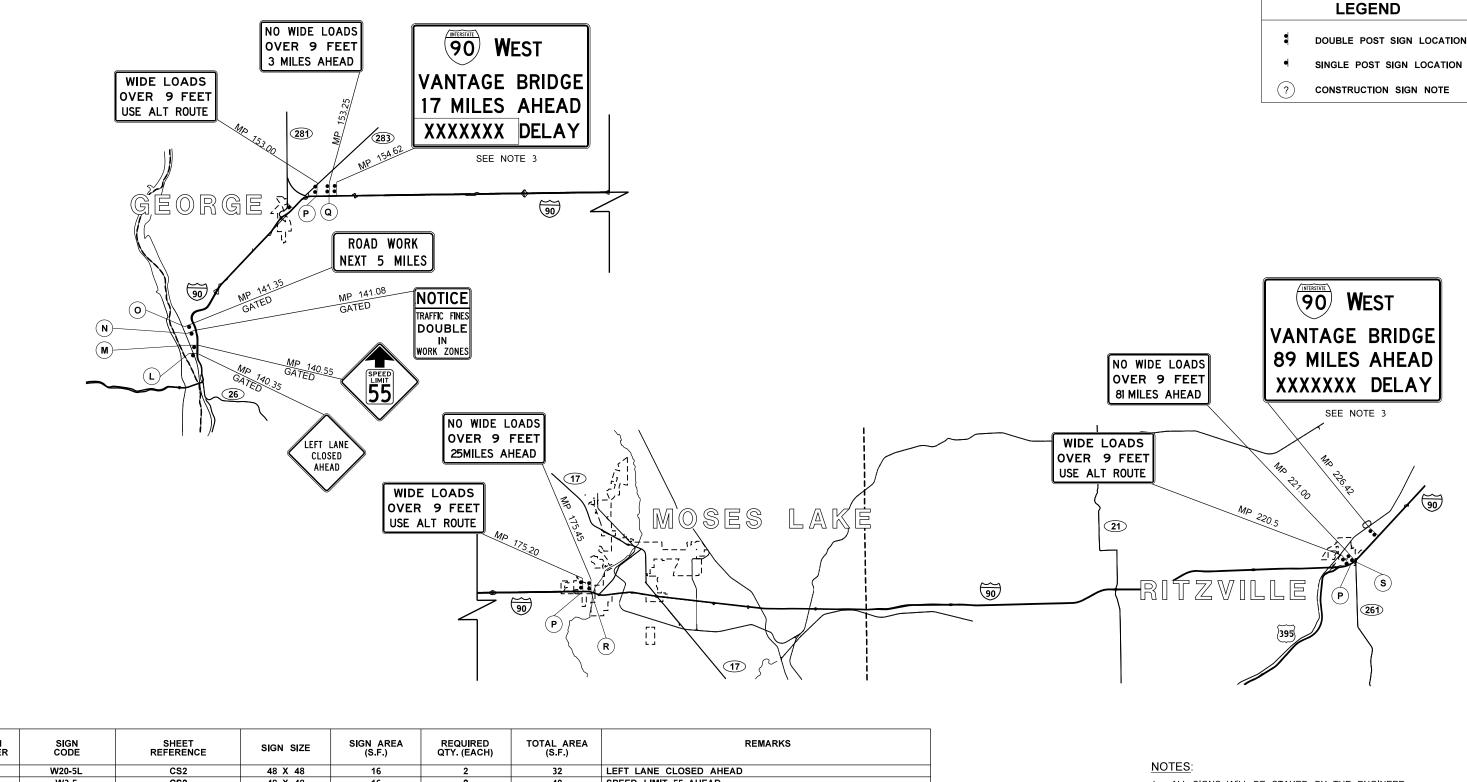
BA93

SHEET

OF

PLOTTED BY: WrennMa FILE PATH: pw://projectstore.wsdot.wa.gov:WSDOT/Documents/_HQ/Bridge & Structures/Bridge Design/_Design Projects/090/BR 90-180/2022_Rehab_XL6352/_DGN/_Sheets/093 BRIDGE BARRIER TYPE F TRANSITION 2.dgn





SIGN LETTER	SIGN CODE	SHEET REFERENCE	SIGN SIZE	SIGN AREA (S.F.)	REQUIRED QTY. (EACH)	TOTAL AREA (S.F.)	REMARKS
L	W20-5L	CS2	48 X 48	16	2	32	LEFT LANE CLOSED AHEAD
М	W3-5	CS2	48 X 48	16	2	40	SPEED LIMIT 55 AHEAD
N	I20-301	CS2	48 X 60	20	2	40	NOTICE TRAFFIC FINES DOUBLE IN WORK ZONES
0	G20-1	CS2	60 X 24	10	2	20	ROAD WORK NEXT 5 MILES
Р	CUSTOM	CS2	96 X 48	32	3	96	WIDE LOADS OVER 9 FT USE ALT ROUTE
Q	CUSTOM	CS2	96 X 48	32	1	32	NO WIDE LOADS OVER 9 FT 3 MILES AHEAD
R	CUSTOM	CS2	96 X 48	32	1	32	NO WIDE LOADS OVER 9 FT 25 MILES AHEAD
S	CUSTOM	CS2	96 X 48	32	1	32	NO WIDE LOADS OVER 9 FEET 81 MILES AHEAD

SHEET TOTAL

DATE BY

NOT TO SCALE

DATE

- 1. ALL SIGNS WILL BE STAKED BY THE ENGINEER.
- 2. ALL SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED BLACK ON WHITE (B/W)
- 3. TRAFFIC DELAY SIGNS ARE SHOWN FOR CLARIFICATION OF OVERALL TRAFFIC CONTROL SIGNING PLAN. SEE ITS PLANS SHEETS FOR QUANTITIES AND INSTALLATION OF PERMANENT TRAFFIC CONTROL SIGNS.

					ა	HEEL TOT	AL			324		
FILE NAME	K:\452205\090\Vantage Bridge	- Replace Deck	and Special Re	epairs\Design_	CAD_Sheet	s\410-WZTC	Plan\X	L6352_	PS_TC.c	lgn		
TIME	7:40:58 AM							REGION NO.	STATE	FED.AID	PROJ.NO.	٦ .
DATE	6/14/2023							10	WASH			
PLOTTED BY	McLaneA							10	WASH			
DESIGNED BY	Z. BILSLAND								UMBER			37/
ENTERED BY	A. MCLANE							23Y	'005			138
CHECKED BY	E. WARREN							CONTR	ACT NO.	LOCA	ATION NO.	ر ا
PROJ. ENGR.	M. SCULLY											

REVISION

REGIONAL ADM. T. BERENDS



Washington State **Department of Transportation**

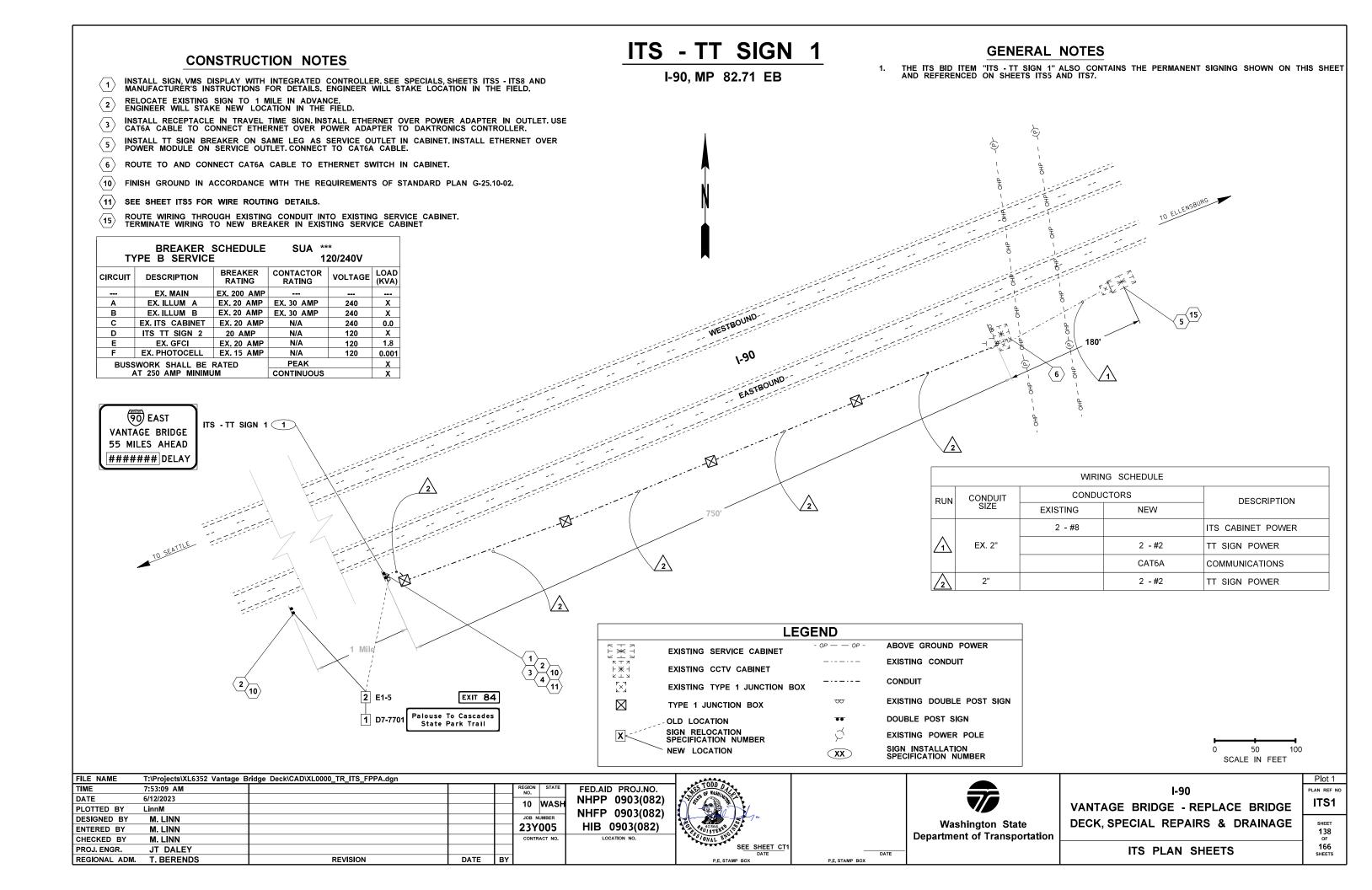
I-90 VANTAGE BRIDGE - REPLACE BRIDGE DECK, SPECIAL REPAIRS & DRAINAGE

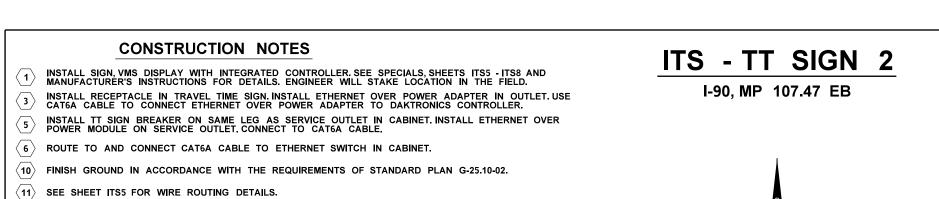
CLASS A SIGN PLAN

137 166 SHEETS

Plot 7

PLAN REF NO CS2



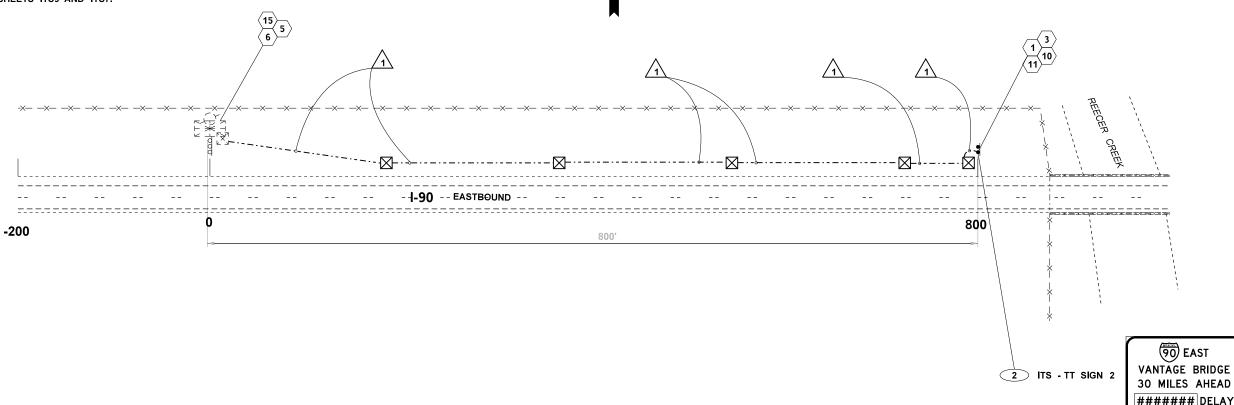


			WIRIN	IG SCHEDULE	
	RUN	CONDUIT SIZE	CONDU	CTORS	DESCRIPTION
	1.011		EXISTING	NEW	BEGOINI HOIV
2"		2"		2 -#2	TT SIGN POWER

GENERAL NOTES

ROUTE WIRING THROUGH EXISTING CONDUIT INTO EXISTING SERVICE CABINET. TERMINATE WIRING TO NEW BREAKER IN EXISTING SERVICE CABINET

1. THE ITS BID ITEM "ITS - TT SIGN 2" ALSO CONTAINS THE PERMANENT SIGNING SHOWN ON THIS SHEET AND REFERENCED ON SHEETS ITS5 AND ITS7.

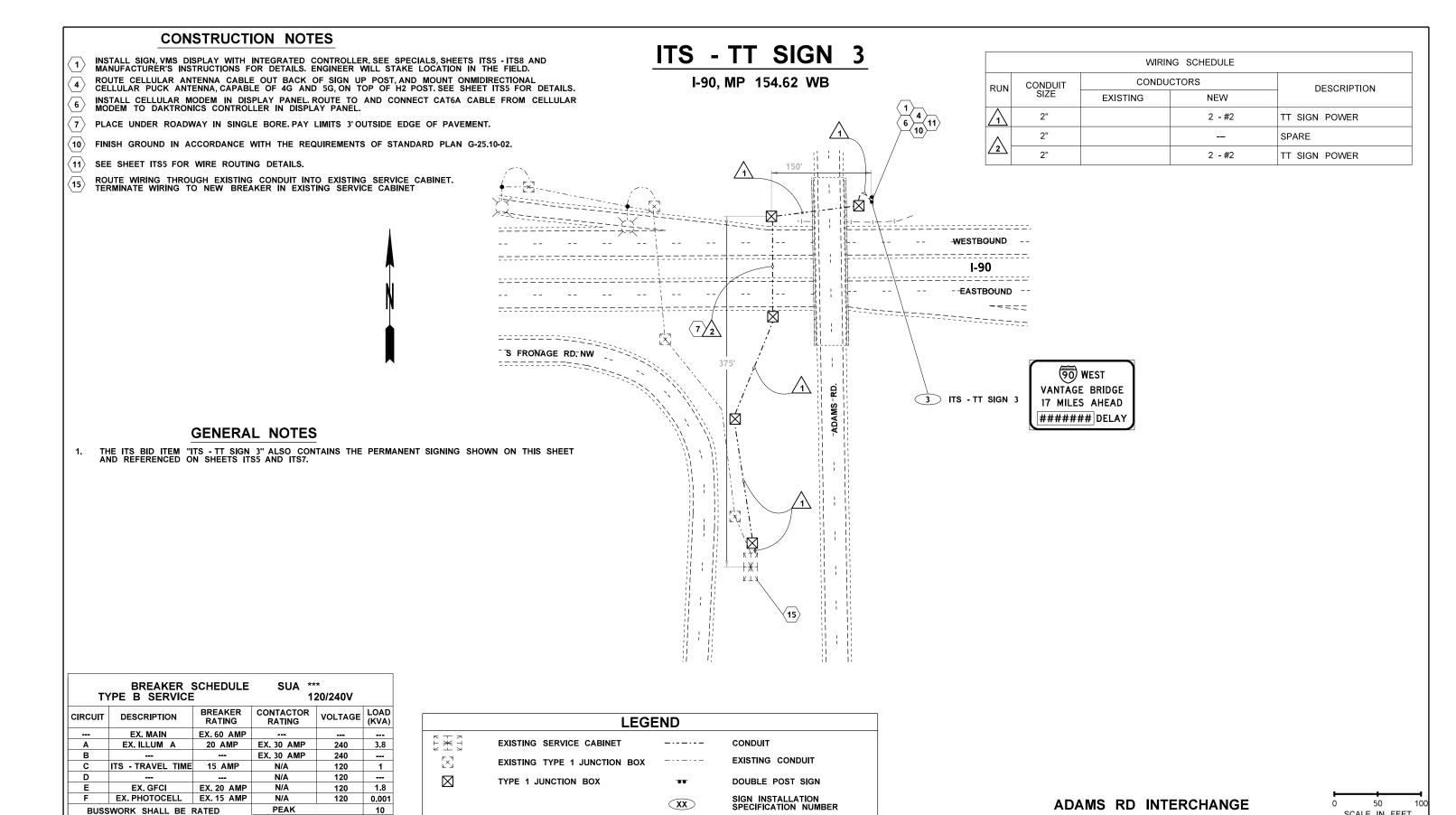


TY	BREAKER : PE B SERVICE		SUA *** 120/240V			
CIRCUIT	DESCRIPTION	BREAKER RATING	CONTACTOR RATING	VOLTAGE	LOAD (KVA)	
	EX. MAIN	EX 100 AMP				
Α						
В	В					
С	ITS - TRAVEL TIME	15 AMP	N/A	120	1	
D	EX. HARS	EX. 15 AMP	N/A	120	1	
E	EX. GFCI	EX. 20 AMP	N/A	120	1.8	
F	EX. PHOTOCELL	EX. 15 AMP	N/A	120	0.001	
BUSS	WORK SHALL BE	PEAK		5		
	AT 250 AMP MINIMU	CONTINUOUS		3.8		

	LEGEND									
Γ *	EXISTING SERVICE CABINET		CONDUIT							
[×]	EXISTING TYPE 1 JUNCTION BOX	000	EXISTING 3 POST SIGN							
	TYPE 1 JUNCTION BOX	••	DOUBLE POST SIGN							
		XX	SIGN INSTALLATION SPECIFICATION NUMBER							

_				_
_				_
0	5	0		100
	SCALE I	N	FEET	

FILE NAME	T:\Projects\XL6352					*****			1	Plot 2
TIME	7:53:19 AM			REGION STATE	FED.AID PROJ.NO.	TODD D			I-90	PLAN REF NO
DATE	6/12/2023			10 WASH	NHPP 0903(082)					ITS2
PLOTTED BY	LinnM			I IU WASH	NHFP 0903(082)				VANTAGE BRIDGE - REPLACE BRIDGE	1102
DESIGNED BY	M. LINN			JOB NUMBER	. ,	Tel San Tel		Washington State	DECK, SPECIAL REPAIRS & DRAINAGE	SHEET
ENTERED BY	M. LINN			23Y005	HIB 0903(082)	20366 60 C		. •		139
CHECKED BY	M. LINN			CONTRACT NO.	LOCATION NO.	ONAL ENGLA		Department of Transportation		OF
PROJ. ENGR.	JT DALEY					SEE SHEET CT1	DATE		ITS PLAN SHEETS	166 SHEETS
REGIONAL ADM	T. BERENDS REVISION	DATE	BY			P.E. STAMP BOX	P.E. STAMP BOX			SHEETS



FILE NAME	T:\Projects\XL6352 Vantage Bridge Deck\CAD\XL0000_TR_ITS_FPPA.dgn					A A A A A A A A A A A A A A A A A A A				Plot 3
TIME	7:53:30 AM			REGION STATE	FED.AID PROJ.NO.	TODD DA			I-90	PLAN REF NO
DATE	6/12/2023			10 WASH	NHPP 0903(082)					ITS3
PLOTTED BY	LinnM			10 WASH	NHFP 0903(082)	I Den			VANTAGE BRIDGE - REPLACE BRIDGE	1.05
DESIGNED BY	M. LINN			JOB NUMBER		15/		Washington State	DECK, SPECIAL REPAIRS & DRAINAGE	SHEET
ENTERED BY	M. LINN			23Y005	HIB 0903(082)	10 40 40366 40 / 10 P		3	l '	140
CHECKED BY	M. LINN			CONTRACT NO.	LOCATION NO.	SEE SHEET CT1		Department of Transportation		OF
PROJ. ENGR.	JT DALEY					SEE SHEET CT1	DATE	-	ITS PLAN SHEETS	166 SHEETS
REGIONAL ADM.	T. BERENDS REVISION	DATE	BY			P.E. STAMP BOX	P.E. STAMP BOX			STILLIS

AT 250 AMP MINIMUM

CONTINUOUS

5.6

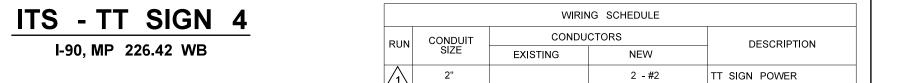
SCALE IN FEET

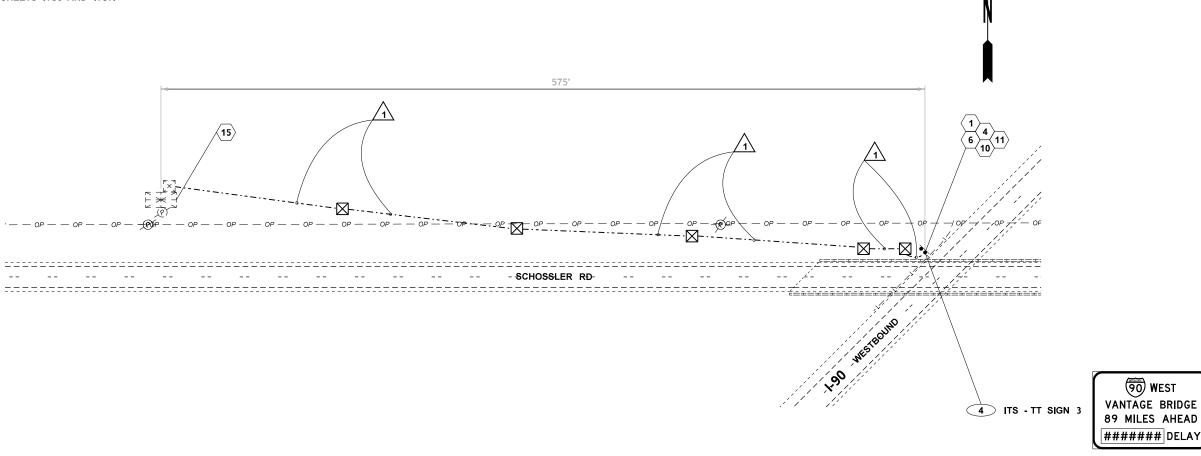
CONSTRUCTION NOTES

- INSTALL SIGN, VMS DISPLAY WITH INTEGRATED CONTROLLER. SEE SPECIALS, SHEETS ITS5 ITS8 AND MANUFACTURER'S INSTRUCTIONS FOR DETAILS. ENGINEER WILL STAKE LOCATION IN THE FIELD.
- ROUTE CELLULAR ANTENNA CABLE OUT BACK OF SIGN UP POST, AND MOUNT ONMIDIRECTIONAL CELLULAR PUCK ANTENNA, CAPABLE OF 4G AND 5G, ON TOP OF H2 POST. SEE SHEET ITS5 FOR DETAILS.
- INSTALL CELLULAR MODEM IN DISPLAY PANEL ROUTE TO AND CONNECT CAT6A CABLE FROM CELLULAR MODEM TO DAKTRONICS CONTROLLER IN DISPLAY PANEL.
- FINISH GROUND IN ACCORDANCE WITH THE REQUIREMENTS OF STANDARD PLAN G-25.10-02.
- $\langle 11 \rangle$ SEE SHEET ITS5 FOR WIRE ROUTING DETAILS.
- ROUTE WIRING THROUGH EXISTING CONDUIT INTO EXISTING SERVICE CABINET. TERMINATE WIRING TO NEW BREAKER IN EXISTING SERVICE CABINET $\langle 15 \rangle$

GENERAL NOTES

THE ITS BID ITEM "ITS -TT SIGN 4" ALSO CONTAINS THE PERMANENT SIGNING SHOWN ON THIS SHEET AND REFERENCED ON SHEETS ITS5 AND ITS7.





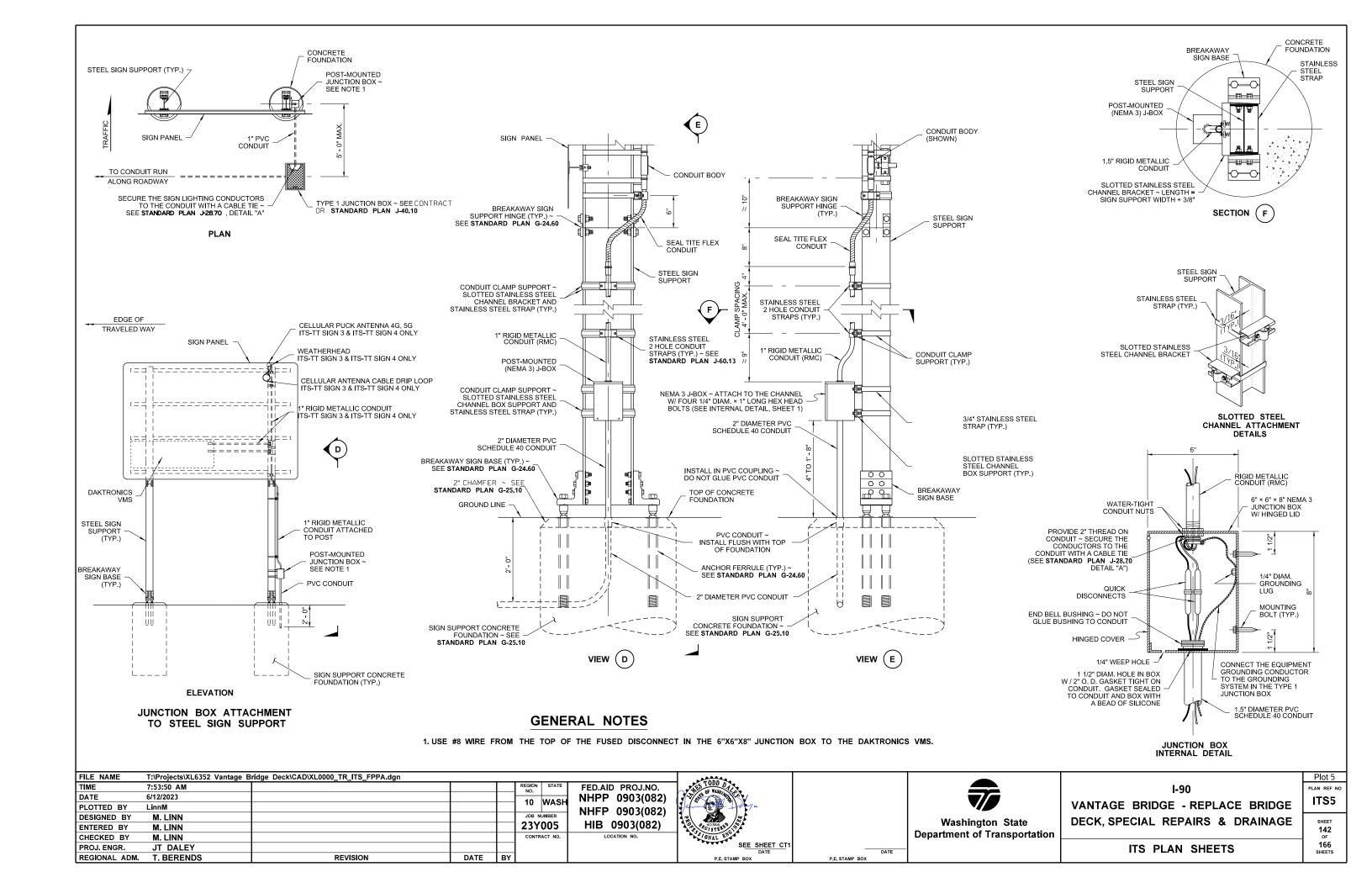
יד	BREAKER S		SUA ** 12	* 20/240V	
CIRCUIT	DESCRIPTION	BREAKER RATING	CONTACTOR RATING	VOLTAGE	LOAD (KVA)
	EX. MAIN	EX. 60 AMP			
Α	EX. LTG. 1	EX. 20 AMP	EX. 30 AMP	240	2
В	EX. LTG. 2	EX. 20 AMP	EX. 30 AMP	240	2
С				240	0.0
D	ITS - TRAVEL TIME	15 AMP		120	1
Е	EX. GFCI	EX. 20 AMP		120	1.8
F	EX. PHOTOCELL	EX.15 AMP		120	0.001
BUSS	WORK SHALL BE I	RATED	PEAK		10
	AT 250 AMP MINIMU	M	CONTINUOUS		5

LEG	END	
EXISTING SERVICE CABINET	- OP — OP -	ABOVE GROUND POWER
EXISTING TYPE 1 JUNCTION BOX		CONDUIT
TYPE 1 JUNCTION BOX	**	DOUBLE POST SIGN
EXISTING POWER POLE	XX	SIGN INSTALLATION SPECIFICATION NUMBER
	EXISTING SERVICE CABINET EXISTING TYPE 1 JUNCTION BOX TYPE 1 JUNCTION BOX	EXISTING TYPE 1 JUNCTION BOX TYPE 1 JUNCTION BOX ***

SCHOSSLER RD INTERCHANGE

_				
_		-		100
0		50		IUU
	SCALE	IN	FEET	

FILE NAME	T:\Projects\XL6352					******			Í	Plot 4
TIME	7:53:37 AM			REGION STATE	FED.AID PROJ.NO.	ON WASH			I-90	PLAN REF NO
DATE	6/12/2023			10 WASH	NHPP 0903(082)	J. T. Lett D. May 2.				ITS4
PLOTTED BY	LinnM			10 WASH	NHFP 0903(082)				VANTAGE BRIDGE - REPLACE BRIDGE	1107
DESIGNED BY	M. LINN			JOB NUMBER		13 / Ju		Washington State	DECK, SPECIAL REPAIRS & DRAINAGE	SHEET
ENTERED BY	M. LINN			23Y005	HIB 0903(082)	1018TE]	· · · · · · · · · · · · · · · · · · ·	141
CHECKED BY	M. LINN			CONTRACT NO.	LOCATION NO.	SEE SHEET CT4		Department of Transportation		OF
PROJ. ENGR.	JT DALEY					SEE SHEET CT1	DATE		ITS PLAN SHEETS	166 SHEETS
REGIONAL ADM.	T. BERENDS REVISION	DATE	BY			P.E. STAMP BOX	P.E. STAMP BOX			SHEETS



SIGN RELOCATION SPECIFICATIONS

Ш	SIGN NO.	OLD STATION	NEW STATION	SIGN CODE	SIGN DESCRIPTION	SIGN	SIZE	NEW POST	POST SIZE (TRADE SIZE)	POST		POST (FE	LENGTH ET)		CLE/	RANCE EET)	REMARKS
П	NO.	LOCATION	LOCATION			Х	Υ	MATERIAL	(TRADE SIZE)	ITPE	H 1	H 2	H 3	H 4	V	W	
Ш	1	I-90 MP 82.71 RT	I-90 MP 81.71 RT	D7-7701	PALOUSE TO CASCADES STATE PARK TRAIL	4'0"	16'0"	MASSH-400	4" SQ		14	16			7	22	SEE NOTE 1
П	2	I-90 MP 82.71 RT	I-90 MP 81.71 RT	E1-5	EXIT 84	2'0"	7'0"								11	22	MOUNT ABOVE RELOCATION SIGN 1, SEE NOTE 1

SIGN INSTALLATION SPECIFICATIONS

S	IGN	STATION	SIGN CODE	SIGN DESCRIPTION	SIGN	SIZE	LETTER SIZE OR CODE		POST MATERIAL	POST SIZE (TRADE SIZE)	POST		POST LENGT (FEET)	1	CLEA (FE	RANCE ET)	REMARKS
	10.	LOCATION			Х	Υ	OK CODE	TYPE		(TRADE SIZE)	ITFE	H 1	H 2 H 3	H 4	V	W	
	1	I-90, MP 82.71 RT	ITS - TT SIGN 1	MILEAGE SIGN W/ ELECTRONIC DISPLAY	8'0"	12'0"	*	х	STEEL	W6 x 12	TP	18	21		7	22	VANTAGE BRIDGE 55 MILES AHEAD, SEE NOTE 2
	2	I-90, MP 107.47 RT	ITS - TT SIGN 2	MILEAGE SIGN W/ ELECTRONIC DISPLAY	8'0"	12'0"	*	х	STEEL	W6 x 12	TP	19	23		7	22	VANTAGE BRIDGE 30 MILES AHEAD
ΙГ	3	I-90, MP 154.62 LT	ITS - TT SIGN 3	MILEAGE SIGN W/ ELECTRONIC DISPLAY	8'0"	12'0"	*	х	STEEL	W6 x 12	TP	18	20		7	25	VANTAGE BRIDGE 17 MILES AHEAD
	4	I-90, MP 226.42 LT	ITS - TT SIGN 4	MILEAGE SIGN W/ ELECTRONIC DISPLAY	8'0"	12'0"	*	х	STEEL	W6 x 12	TP	18	22		7	22	VANTAGE BRIDGE 144 MILES AHEAD

^{*} SEE SHEETS ITS7 AND ITS8 FOR DETAILS.

NOTES: POST LENGTHS SHOWN ARE APPROXIMATE. FINAL VALUES SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD PRIOR TO FABRICATION.

FOR STRUCTURE AND MOUNTING DETAILS SEE STANDARD PLAN SHEET SERIES G.

FOR CODE REFERENCES AND STANDARD SIGN LAYOUT DETAILS SEE WASHINGTON STATE "SIGN FABRICATION MANUAL"

W BEAM POST SIZES SHOWN ARE FOR ASTM A 36 ENGINEER WILL STAKE LOCATION IN THE FIELD.

PERMANENT SIGNING IS PART OF THE ITS TT SIGN BID ITEM ASSOCIATED AT IT'S INSTALLATION LOCATION.

CONSTRUCTION NOTES:

- 1. MASSH-400 GROUND MOUNTED SIGN SUPPORT SYSTEM WITH SLIP BASE.
- 2. BACK OF SIGN SHALL HAVE TYPE I BROWN SHEETING

FILE NAME	T:\Projects\XL6352 Vantage B	ridge Deck\CAD\XL0000_TR_ITS_FPPA.dgn				
TIME	7:54:06 AM				REGION STATE	FED.AID PROJ.NO.
DATE	6/12/2023				10 WASI	NHPP 0903(082)
PLOTTED BY	LinnM				I IU WASI	NHFP 0903(082)
DESIGNED BY	M. LINN				JOB NUMBER	1 ' '
ENTERED BY	M. LINN				23Y005	HIB 0903(082)
CHECKED BY	M. LINN				CONTRACT NO.	LOCATION NO.
PROJ. ENGR.	JT DALEY					
REGIONAL ADM.	T. BERENDS	REVISION	DATE	BY		





I-90 VANTAGE BRIDGE - REPLACE BRIDGE DECK, SPECIAL REPAIRS & DRAINAGE

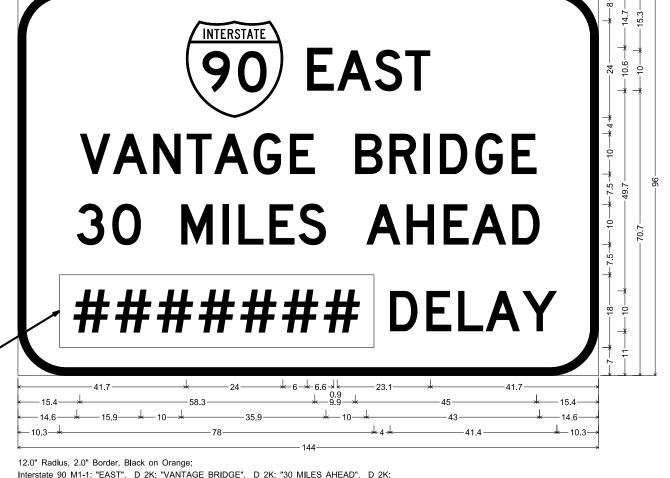
ITS PLAN SHEETS

143 of 166 sheets

Plot 6

PLAN REF NO



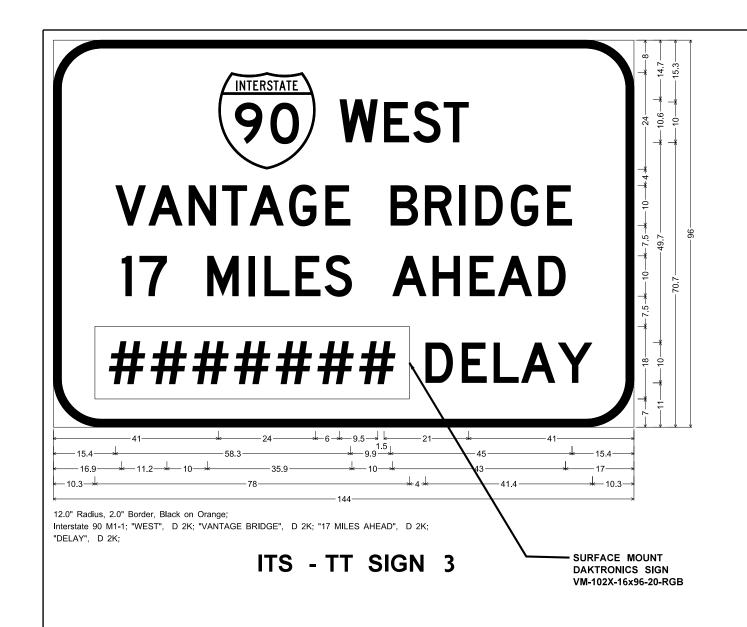


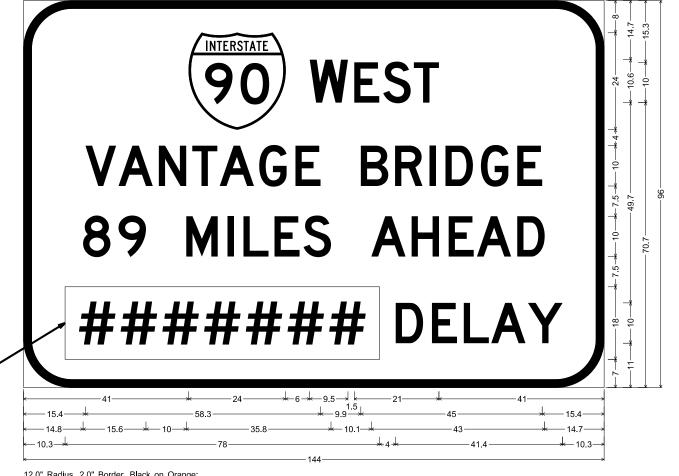
SURFACE MOUNT **DAKTRONICS SIGN** VM-102X-16x96-20-RGB

> Interstate 90 M1-1; "EAST", D 2K; "VANTAGE BRIDGE", D 2K; "30 MILES AHEAD", D 2K; "DELAY", D 2K;

ITS - TT SIGN 2

FILE NAME	T:\Projects\XL6352 Vantage E	Bridge Deck\CAD\XL0000_TR_ITS_FPPA.dgn				A CORD				Plot 7
TIME	7:54:17 AM			REGION STATE	FED.AID PROJ.NO.	TODD DA			I-90	PLAN REF NO
DATE	6/12/2023			10 WASH	NHPP 0903(082)					ITS7
PLOTTED BY	LinnM			IU WASH	NHFP 0903(082)	1/4-1200			VANTAGE BRIDGE - REPLACE BRIDGE	1.07
DESIGNED BY	M. LINN			JOB NUMBER	· ,			Washington State	DECK, SPECIAL REPAIRS & DRAINAGE	SHEET
ENTERED BY	M. LINN			23Y005	HIB 0903(082)	40366 60 C		J	<u> </u>	144
CHECKED BY	M. LINN			CONTRACT NO.	LOCATION NO.	ONAL EN		Department of Transportation		OF
PROJ. ENGR.	JT DALEY					SEE SHEET CT1	DATE	-	ITS PLAN SHEETS	166 SHEETS
REGIONAL ADM	T BERENDS	REVISION	DATE	RY		DE STAMP POY	DE STAMP POY		1.0 0	SHEETS



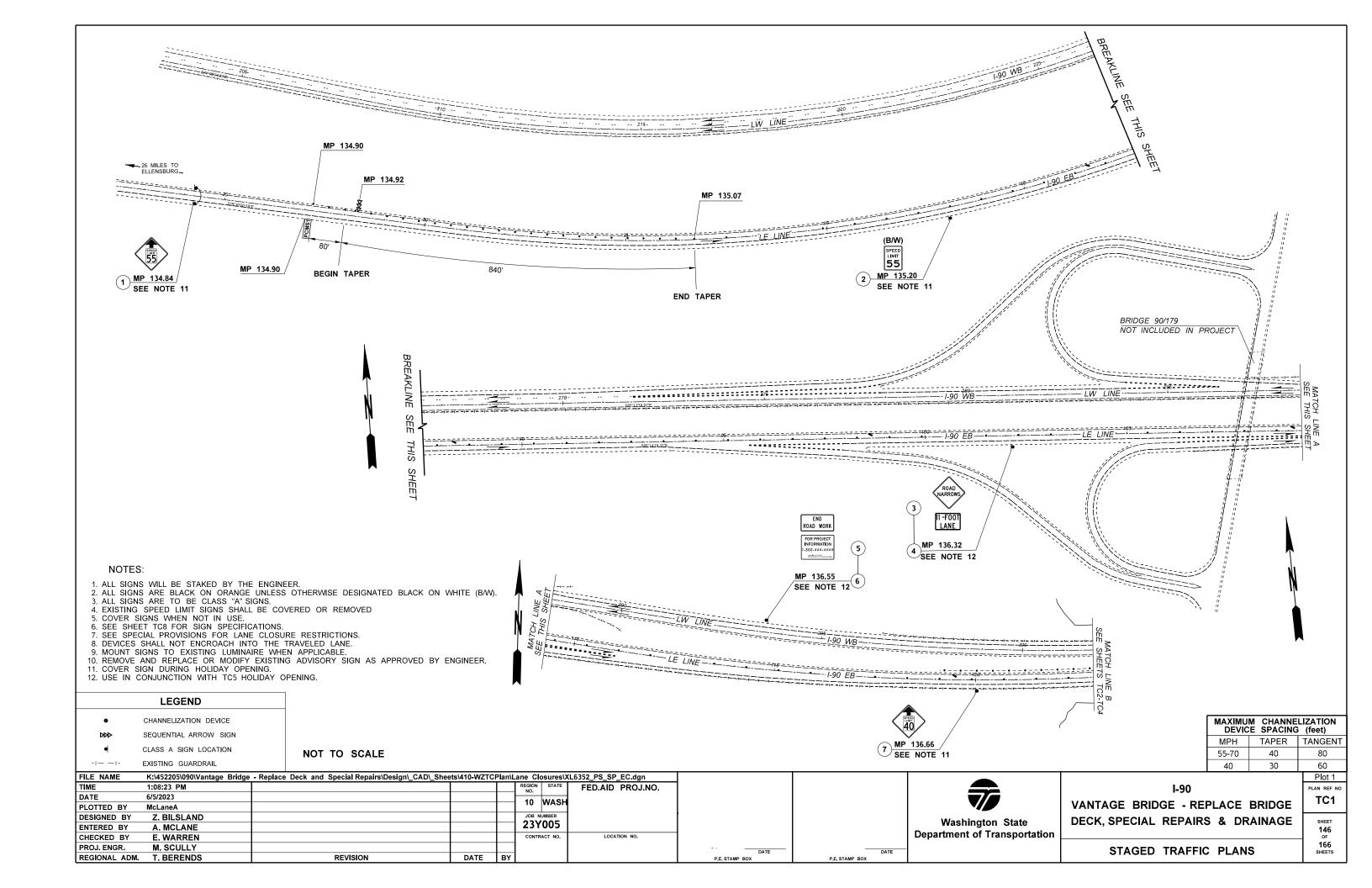


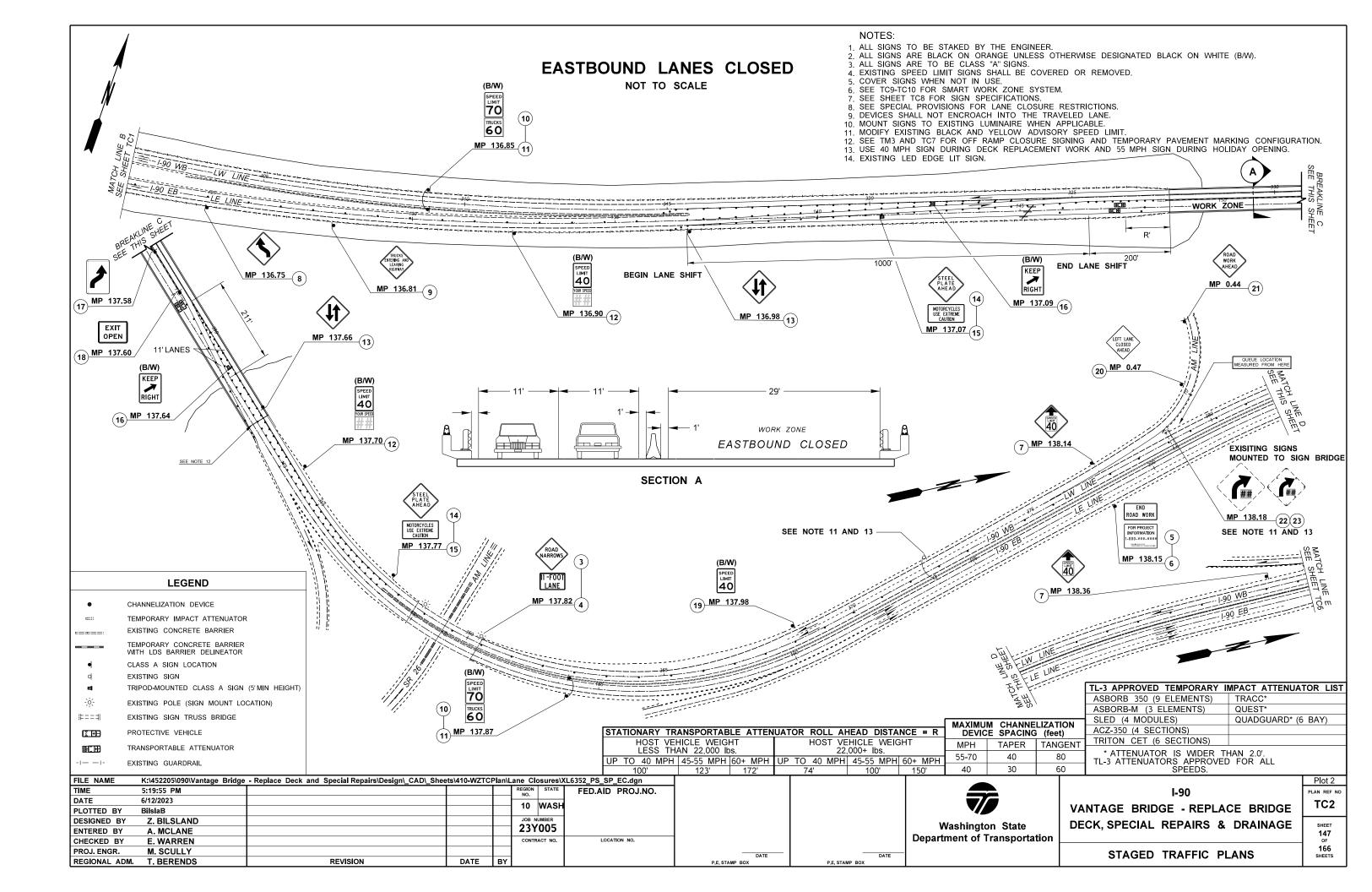
12.0" Radius, 2.0" Border, Black on Orange; Interstate 90 M1-1; "WEST", D 2K; "VANTAGE BRIDGE", D 2K; "89 MILES AHEAD", D 2K; "DELAY". D 2K;

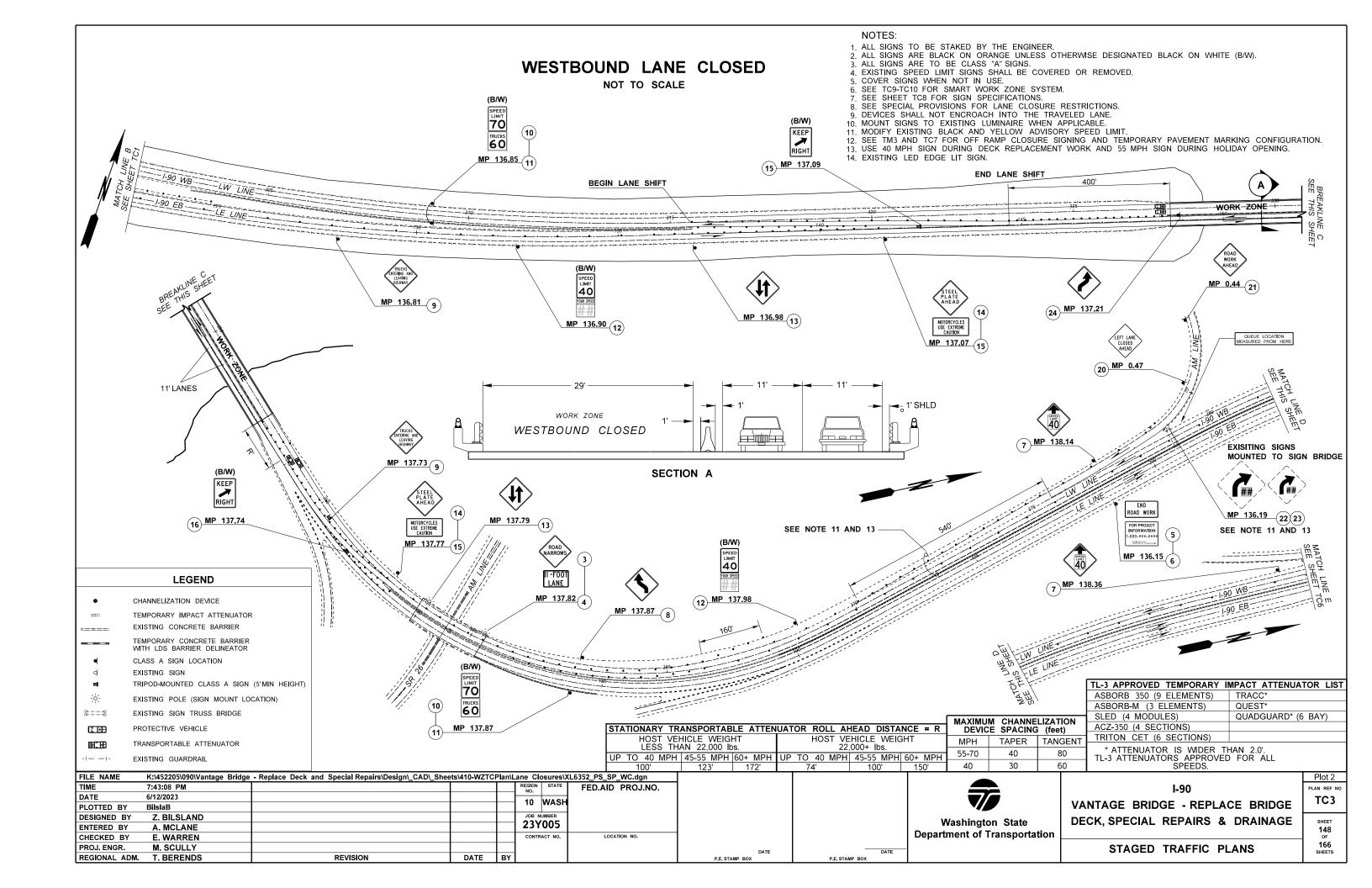
ITS - TT SIGN 4

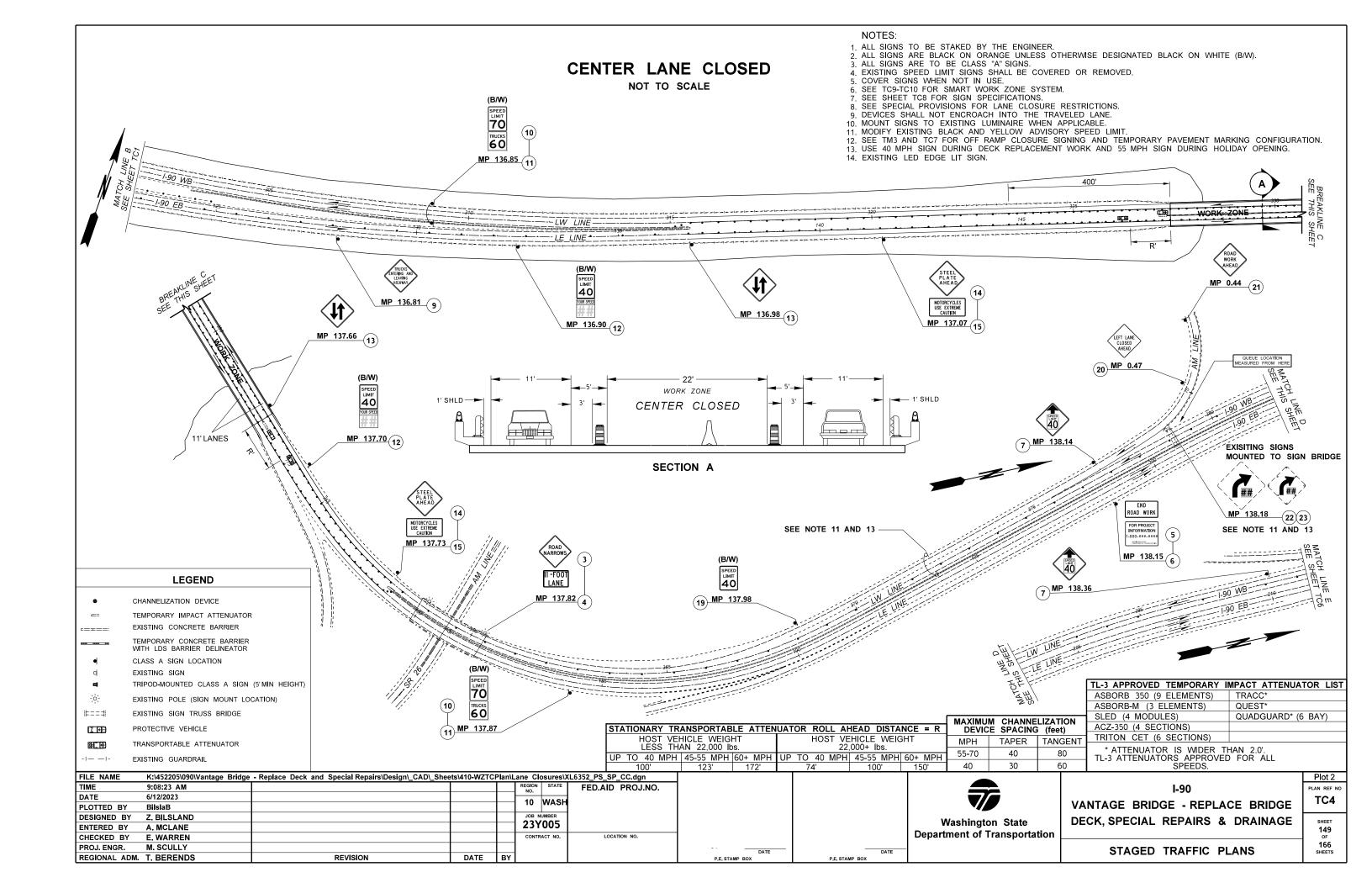
FILE NAME	T:\Projects\XL6352 Vantage Bridge Deck\CAD\XL0000_TR_ITS_FPPA.dgn					A SORD				Plot 8
TIME	7:54:31 AM			REGION STATE	FED.AID PROJ.NO.	TODD D			I-90	PLAN REF NO
DATE	6/12/2023			10 WASH	NHPP 0903(082)			\		ITS8
PLOTTED BY	LinnM			10 WASI	NHFP 0903(082)	James De 14			VANTAGE BRIDGE - REPLACE BRIDGE	1100
DESIGNED BY	M. LINN			JOB NUMBER	` ′			Washington State	DECK, SPECIAL REPAIRS & DRAINAGE	SHEET
ENTERED BY	M. LINN			23Y005	HIB 0903(082)	2018 TERES		3	·	145
CHECKED BY	M. LINN			CONTRACT NO.	LOCATION NO.	SEE SHEET CT4		Department of Transportation		OF
PROJ. ENGR.	JT DALEY					SEE SHEET CT1	DATE		ITS PLAN SHEETS	166 SHEETS
REGIONAL ADM	T BERENDS REVISION	DATE	BY	•	1	DE STAMP DOY	DE STAMP POY			SIIEE 13

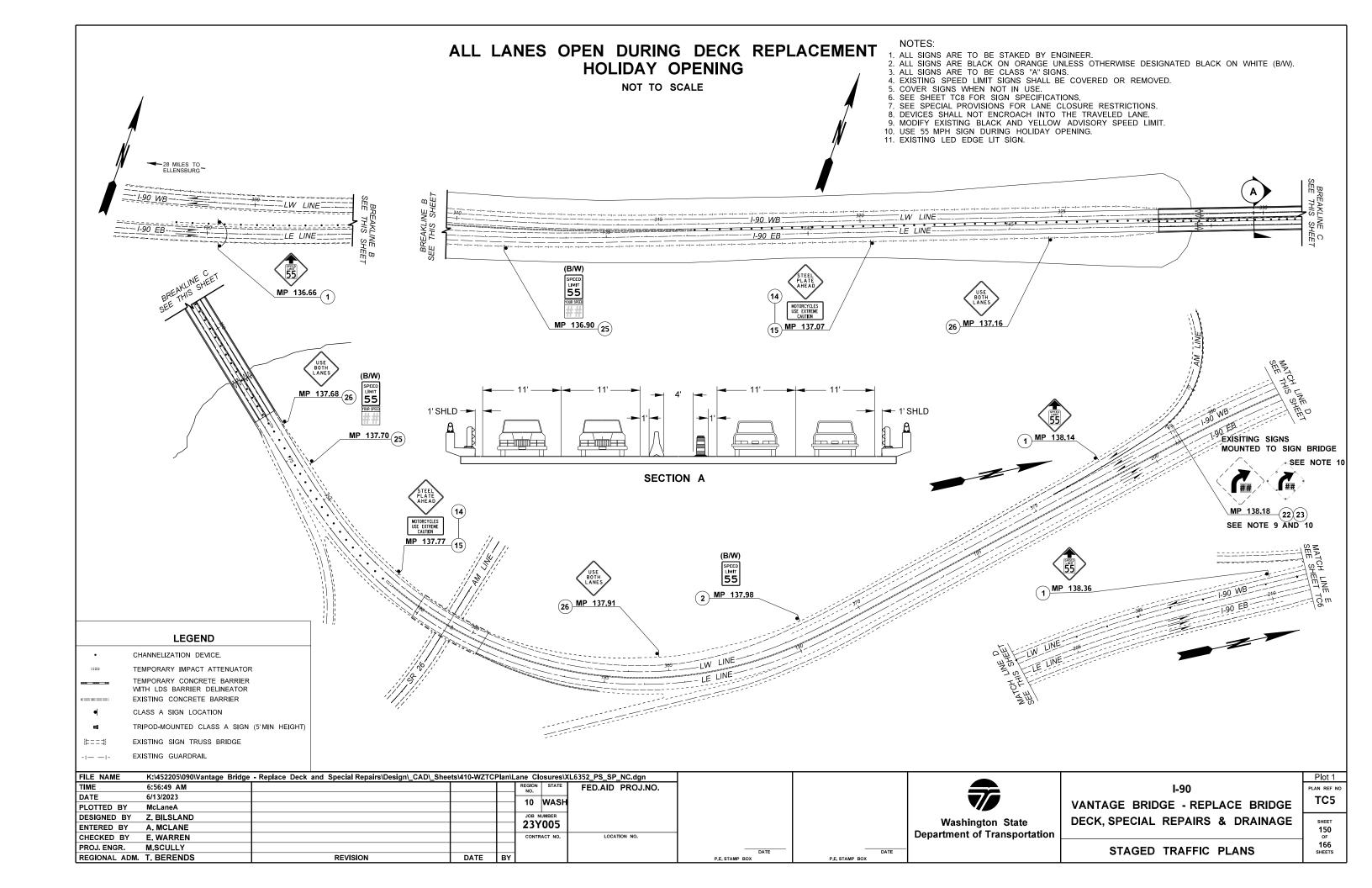
SURFACE MOUNT DAKTRONICS SIGN VM-102X-16x96-20-RGB

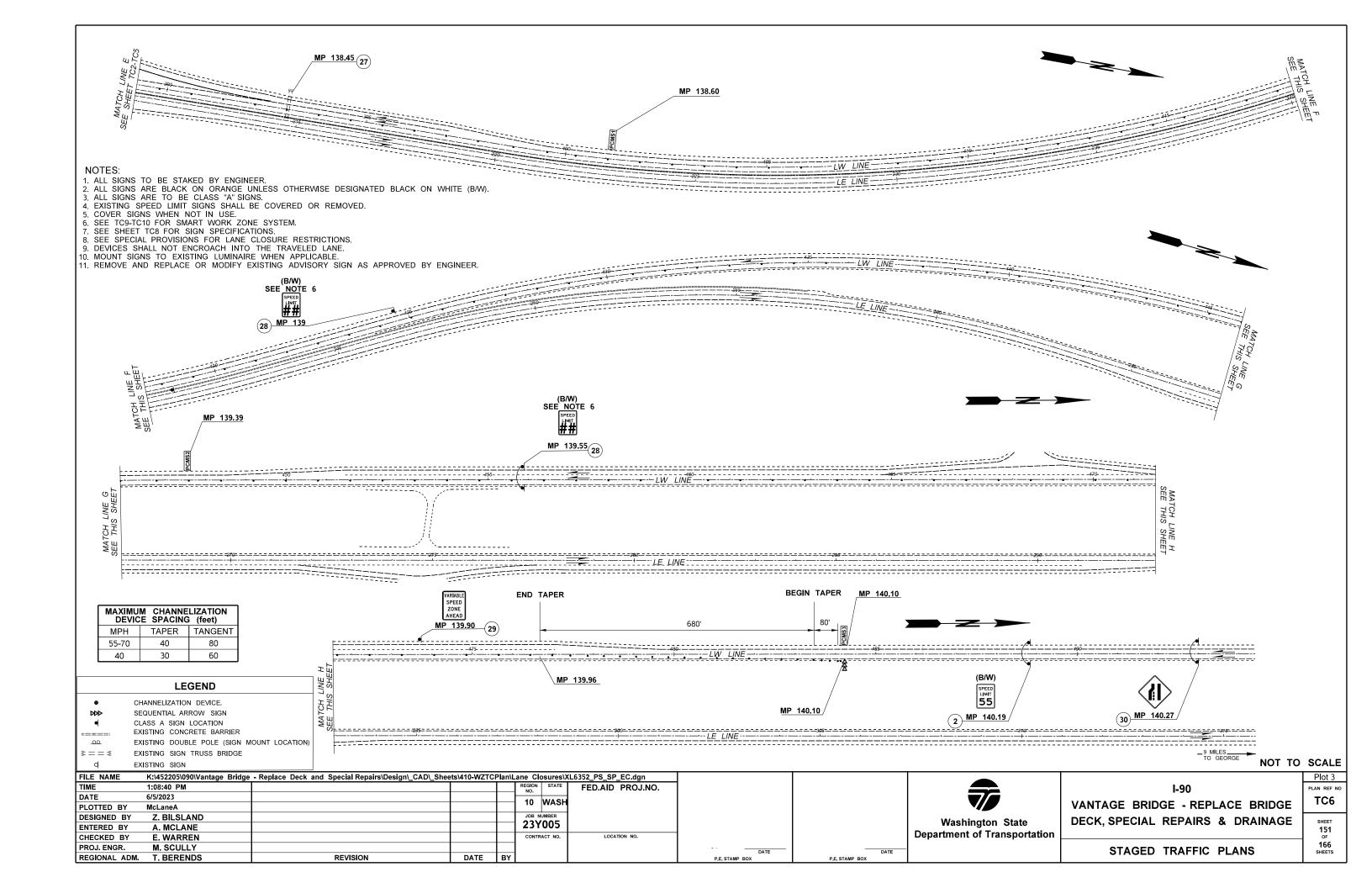








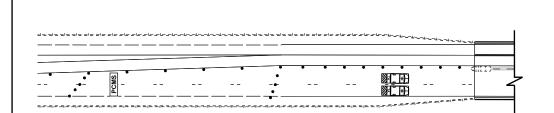


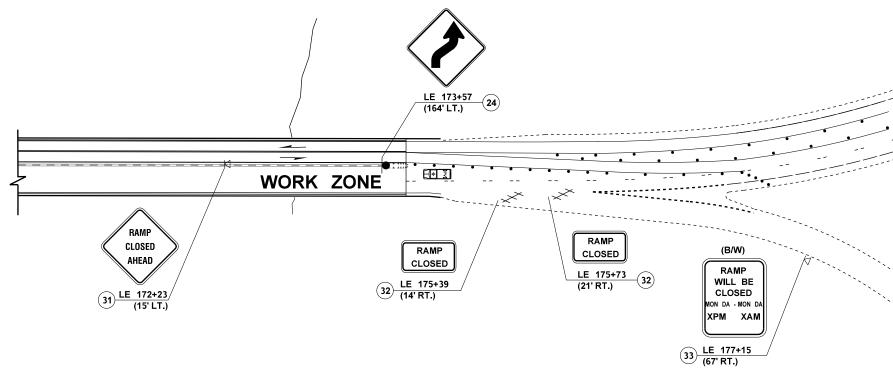


PC		ELIZATION		ı
1	et)	ACING (fe	SP	L
	TANGENT	TAPER	MPH	ı
EXIT	80	40	50/70	
137	60	30	35/45	
CLOSED	40	20	25/30	
2.0 SEC				

FIELD LOCATE

I-90 EASTBOUND EXIT 137 OFF-RAMP CLOSURE





OFF-RAMP CLOSURE

INSTALL 3 DAYS PRIOR TO CLOSURE

LEGEND

TYPE 3 BARRICADE

☐ TEMPORARY SIGN LOCATION

TRAFFIC SAFETY DRUM

TEMPORARY BARRIER ATTENUATOR

PROTECTIVE VEHICLE

TRUCK MOUNTED ATTENUATOR

• CLASS A SIGN LOCATION

NOTES:

- 1. SEE SPECIAL PROVISIONS FOR CLOSURE HOUR RESTRICTIONS.
- 2. ALL SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED BLACK ON WHITE (B/W).
- 3. SEE SHEET TM7 FOR TEMPORARY PAVEMENT MARKING PLANS.

NOT TO SCALE

FILE NAME	K:\452205\090\Vantage Bridge - Replace Deck and Spec	cial Repairs\Design_CAD_Sheets\410	0-WZTCPlan\l	Exit Ramp Clos	ure\Temp Off Ramp Closure.dg					Plot 1
TIME	12:56:37 PM			REGION STATE	FED.AID PROJ.NO.				I-90	PLAN REF NO
DATE	6/5/2023			10 WASH					WANTAGE DRIBGE BERLAGE BRIBGE	TC7
PLOTTED BY	McLaneA			10 WASI					VANTAGE BRIDGE - REPLACE BRIDGE	
DESIGNED BY	Z. BILSLAND			JOB NUMBER				Washington State	DECK, SPECIAL REPAIRS & DRAINAGE	SHEET
ENTERED BY	A. MCLANE			23Y005				J	1	152
CHECKED BY	E. WARREN			CONTRACT NO.	LOCATION NO.			Department of Transportation		OF
PROJ. ENGR.	M. SCULLY					——————————————————————————————————————	DATE		TRAFFIC CONTROL PLAN	166 SHEETS
REGIONAL ADM.	T. BERENDS RE	EVISION DA	ATE BY	•		PE STAMP BOX	P.F. STAMP BOX		INALLIO CONTROL LAN	SILETO

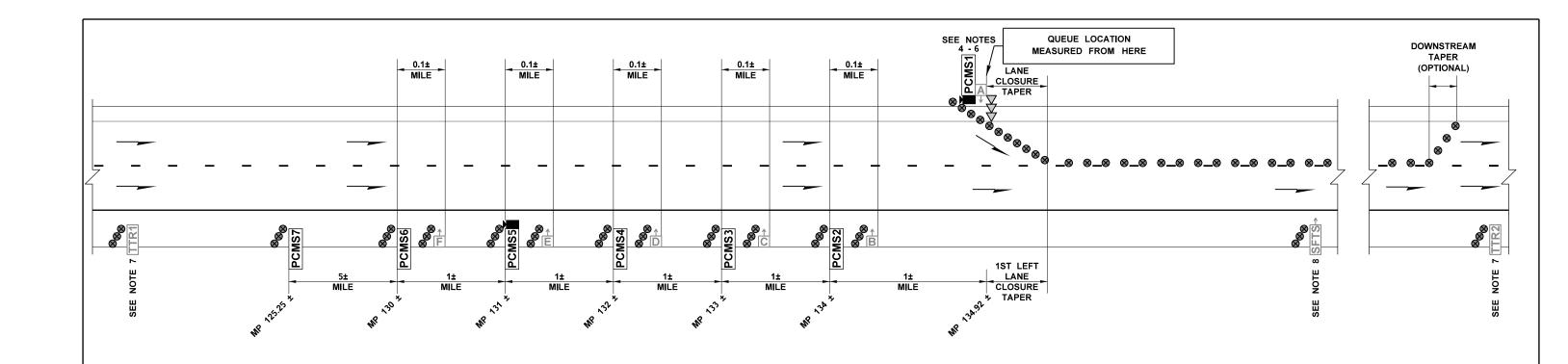
SIGN NUMBER	SIGN CODE	SHEET REFERENCE	SIGN SIZE (L x H)	SIGN AREA (S.F.)	REQUIRED QTY. (EACH)	TOTAL AREA (S.F.)	REMARKS
1	W3-5	TC1, TC5	4 X 4	16	5	80	REDUCED SPEED AHEAD (55 MPH)
2	R2-1	TC1, TC5, TC6	3 X 4	12	4	48	SPEED LIMIT 55 (B/W)
3	W5-1	TC1, TC2, TC3, TC4	4 X 4	16	2	32	ROAD NARROWS
4	CUSTOM	TC1, TC2, TC3, TC4	3 X 4	12	2	24	11 FOOT LANE
5	G20-2A	TC1, TC2, TC3, TC4	4 X 2	8	2	16	END ROAD WORK
6	G24-501	TC1, TC2, TC3, TC4	4 X 3	12	2	24	FOR PROJECT INFO DIAL #
7	W3-5	TC1, TC2, TC3, TC4	4 X 4	16	3	48	REDUCED SPEED AHEAD (40 MPH)
8	W1-4L	TC2, TC3	4 X 4	16	2	32	REVERSE CURVE LEFT
9	W21-30B	TC2, TC3, TC4	4 X 4	16	2	32	TRUCKS ENTERING AND LEAVING HIGHWAY
10	R2-1	TC2, TC3, TC4	3 X 4	12	4	48	SPEED LIMIT 70 (B/W)
11	R2-2P	TC2, TC3, TC4	3 X 3	9	4	36	TRUCKS 60 (B/W)
12	R2-1	TC2, TC3, TC4	3 X 7	21	2	42	SPEED 40 W/ RADAR LED SPEED DISPLAY SIGN (B/W)(RSDS)
13	W6-3	TC2, TC3, TC4	4 X 4	16	2	32	TWO WAY TRAFFIC
14	W8-24	TC2-TC5, TC16	4 X 4	16	2	32	STEEL PLATE AHEAD
15	W21-170P	TC2-TC5, TC16	4 X 2	8	2	16	MOTORCYCLE USE EXTREME CAUTION
16	R4-7B	TC2, TC3	3 X 4	12	3	36	KEEP RIGHT(B/W)
17	W4-1R(MOD)	TC2	3 X 4	12	1	12	REVERSE CURVE RIGHT MODIFIED
18	E5-2A	TC2	4 X 3	12	1	12	EXIT OPEN
19	R2-1	TC2, TC4	3 X 4	12	1	12	SPEED LIMIT 40 (B/W)
20	W20-5L	TC2, TC3, TC4	4 X 4	16	1	16	LEFT LANE CLOSED AHEAD
21	W20-1	TC2, TC3, TC4	4 X 4	16	1	16	ROAD WORK AHEAD
22	W1-2A CUSTOM	TC2, TC3, TC4, TC5	8 X 8	64	1	64	CURVE WARNING SPEED ## MPH
23	W1-2A	TC2, TC3, TC4, TC5	4 X 4	16	1	16	CURVE WARNING SPEED ## MPH
24	W1-4R	TC3, TC7	4 X 4	16	2	32	REVERSE CURVE RIGHT
25	R2-1	TC5	3 X 4	12	2	24	SPEED 55 W/ RADAR LED SPEED DISPLAY SIGN (B/W)(RSDS)
26	CUSTOM	TC5	4 X 4	16	2	32	USE BOTH LANES
27	CUSTOM	TC6	2 X 2	4	1	4	COVER LEFT DOWN ARROW ON OVERHEAD SIGN WITH VINYL
28	VARIABLE SPEED	TC6	3 X 4	12	3	36	SMART WORK ZONE VARIABLE SPEED LIMIT (B/W)
29	CUSTOM	TC6	4 X 5	20	1	20	VARIABLE SPEED ZONE AHEAD
30	W4-2R	TC6	4 X 4	16	2	32	LANE ENDS MERGE RIGHT
31	W20-1 (ALT)	TC7	4 X 3	12	1	12	RAMP CLOSED AHEAD
32	R11-201	TC7	4 X 2.5	10	2	16	RAMP CLOSED (B/W)
33	R11-1501	TC7	4 X 5	20	1	20	RAMP WILL BE CLOSED. DATE AND TIME. (B/W)
34	W8-1(MOD)	TC16	4 X 4	16	2	32	BUMP
				SHEET	TOTAL	986	

NOTES:

1. SEE SHEETS TC1-TC7, TC19 FOR SIGN LOCATIONS. 2. QUANTITIES REQUIRED ARE FOR TC1-TC7, TC19.

TRAFFIC CONTROL PLAN SIGN SPECIFICATIONS

FILE NAME	K:\452205\090\Vantage Bridge	- Replace Deck and Special Repairs\Design_CAD_She	ets\410-WZTC	Plan\L	ane Closures\.	(L6352_PS_SP_NC.dgn					Plot 2
TIME	1:12:24 PM				REGION STATE	FED.AID PROJ.NO.				I-90	PLAN REF NO
DATE	6/5/2023				10 WASH						TC8
PLOTTED BY	McLaneA				IU WASH					VANTAGE BRIDGE - REPLACE BRIDGE	.00
DESIGNED BY	Z. BILSLAND				JOB NUMBER				Washington State	DECK, SPECIAL REPAIRS & DRAINAGE	SHEET
ENTERED BY	A. MCLANE				23Y005				3	1	153
CHECKED BY	E. WARREN				CONTRACT NO.	LOCATION NO.			Department of Transportation		OF
PROJ. ENGR.	M. SCULLY						DATE	——————————————————————————————————————		CLASS A SIGNS	166 SHEETS
REGIONAL ADM.	T. BERENDS	REVISION	DATE	BY			PE STAMP BOX	PE STAMP BOX		DEAGG A GIGITO	SILEETS



NOTES:

- 1. THIS PLAN IS USED IN CONJUNCTION WITH TC1-TC4, TC6-TC7.
- 2. SEE SMART WORK ZONE SYSTEM (SWZS) SPECIAL PROVISION FOR DETAILS.
- 3. MODIFICATIONS TO PCMS MESSAGES SHALL BE ACCEPTED BY THE ENGINEER.
 "##" ARE CHANGEABLE VALUES BASED ON REAL-TIME TRAVEL DELAY TIMES.
- 4. ADJUST SWZS COMPONENTS TO AVOID CONFLICTS WITH SEQUENTIAL ARROW SIGNS OR OTHER TRAFFIC CONTROL DEVICES, NARROW SHOULDERS, AND RAMPS.
- 5. LOCATE PCMSs PER STANDARD SPECIFICATION 1-10.3(3)C. PCMS MAY BE PLACED ON OPPOSITE SHOULDER BUT AVOID RAMP GORES. WHEN LOCATED BEHIND BARRIER/GUARDRAIL OR WITHIN CLOSURE, TRANSVERSE TRAFFIC DRUMS OPTIONAL.
- 6. MINIATURE PCMS (~6'WIDE, 12+ INCH CHARACTERS) ALLOWED FOR PCMS1.
- 7. IN LIEU OF TRAVEL TIME READERS, ALTERNATIVE METHODS (SUCH AS USING TRAFFIC SENSOR SPEED DATA) IS ACCEPTABLE WHEN ACCURATE WITHIN 5± MINUTES.
- 8. LOCATE SIDE FIRE TRAFFIC SENSOR PRIOR TO ANY OPEN RAMPS.
- 9. IF SYSTEM FAILS SEE "SMART WORK ZONE SYSTEM FAILURE PROTOCOL" PROVISION.

LEG	END
8	TRAFFIC SAFETY DRUM
#	TRAFFIC SENSOR
← <u>SFTS</u>	SIDE FIRE TRAFFIC SENSOR
TTR#	PORTABLE TRAVEL TIME READER
	SEQUENTIAL ARROW SIGN
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN
	PAN-TILT-ZOOM CAMERA

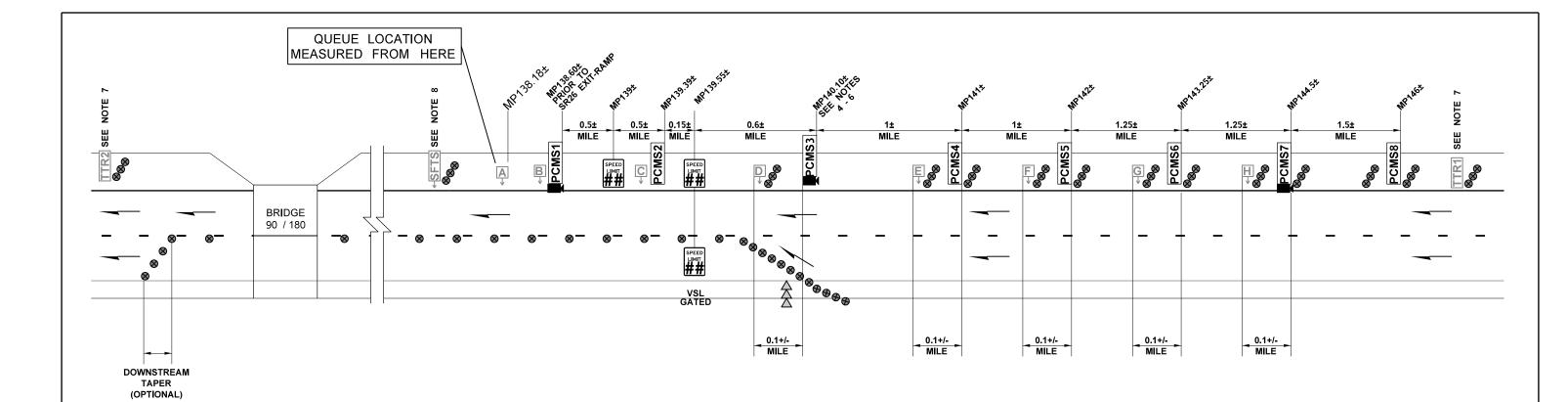
SYMBOL	TRIGGER SPEED (mph)	TRAFFIC CONDITIO
FF	30+	Free Flo
SL	<30	Slowed

	QUEUE -		TR/	٩FF	IC	SEI	NSC	DRS	PCM	IS 7	PCM	IS 6	PCM	S 5	PCM	S 4	PCM	S 3	PCN	IS 2	PCN	IS 1
			FΙ	Е	D	С	В	Α	1	2	1	2	1	2	1	2	1	2	1	2	1	2
	(miles) [TF	RAFF	IC (CON	DITIO	NC	2.0 SEC	2.0 SEC	2.0 SEC	2.0 SEC	2.0 SEC	2.0 SEC	2.0 SEC	2.0 SEC	2.0 SEC	2.0 SEC	2.0 SEC	2.0 SEC	2.0 SEC	2.0 SEC
									FREELOW	NO									LEFT	1		
	None		FF	FF	FF	FF	FF	FF	TRAFFIC	BACKUPS		(Blank)		(Blank)		(Blank)		(Blank)	LANE	MILE	(Blank)	(Blank)
									TO BRIDGE	PRESENT									CLOSED	AHEAD		
									TRAFFIC	9 MILES					SINGLE	3	TRAFFIC	##	SLOW OR	NEXT	MERGE	TAKE
0.0	1 TO	0.9	FF	FF	FF	FF	FF	SL	BACKUP	AHEAD		(Blank)		(Blank)	LANE	MILES	BACKUPS	MINUTE	STOPPED	1	HERE	TURNS
									PRESENT	~ MP134					CLOSURE	AHEAD	PRESENT	DELAY	TRAFFIC	MILE	HEKE	TURNS
									TRAFFIC	8 MILES			SINGLE	4	TRAFFIC	##	SLOW OR	NEXT	1 MILE	USE	MERGE	TAKE
0.9	1 TO	1.9	FF	FF	FF	FF	SL	SL	BACKUP	AHEAD		(Blank)	LANE	MILES	BACKUPS	MINUTE	STOPPED	2	TO MERGE	LEFT	HERE	TURNS
									PRESENT	~ MP134			CLOSURE	AHEAD	PRESENT	DELAY	TRAFFIC	MILES	POINT	LANE TOO	HEKE	TURNS
									TRAFFIC	7 MILES	SINGLE	5	TRAFFIC	##	SLOW OR	NEXT	2 MILES	USE	1 MILE	USE	MERGE	TAKE
1.9	1 TO	2.9	FF	FF	FF	SL	SL	SL	BACKUP	AHEAD	LANE	MILES	BACKUPS	MINUTE	STOPPED	3	TO MERGE	BOTH	TO MERGE		HERE	TURNS
									PRESENT	~ MP134	CLOSURE	AHEAD	PRESENT	DELAY	TRAFFIC	MILES	POINT	LANES	POINT	LANE TOO	TILIXL	TOINIO
									TRAFFIC	6 MILES	TRAFFIC	##	SLOW OR	NEXT	3 MILES	USE	2 MILES	USE	1 MILE	USE	MERGE	TAKE
2.9	1 TO	3.9	FF	FF	SL	SL	SL	SL	BACKUP	AHEAD	BACKUPS	MINUTE	STOPPED	4	TO MERGE	BOTH	TO MERGE	BOTH	TO MERGE	LEFT	HERE	TURNS
									PRESENT	~ MP130	PRESENT	DELAY	TRAFFIC	MILES	POINT	LANES	POINT	LANES	POINT	LANE TOO	HEIKE	TOKNO
									TRAFFIC	5 MILES	SLOW OR	NEXT	4 MILES	##	3 MILES	USE	2 MILES	USE	1 MILE	USE	MERGE	TAKE
3.9	1 TO	4.9	FF	SL	SL	SL	SL	SL	BACKUP	AHEAD	STOPPED	5	TO MERGE	MINUTE	TO MERGE	BOTH	TO MERGE	BOTH	TO MERGE	LEFT	HERE	TURNS
									PRESENT	~ MP130	TRAFFIC	MILES	POINT	DELAY	POINT	LANES	POINT	LANES	POINT	LANE TOO	HEINE	TORNS
			Ī	T					SLOW OR	WITHIN	5 MILES	###	4 MILES	USE	3 MILES	USE	2 MILES	USE	1 MILE	USE	MERGE	TAKE
	4.91+		SL	SL	SL	SL	SL	SL	STOPPED	NEXT	TO MERGE	MINUTE	TO MERGE	BOTH	TO MERGE	BOTH	TO MERGE	BOTH	TO MERGE		HERE	TURNS
									TRAFFIC	5 MILES	POINT	DELAY	POINT	LANES	POINT	LANES	POINT	LANES	POINT	LANE TOO	HERE	TURNS

EASTBOUND 6-MILE SMART WORK ZONE SYSTEM FREEWAY (2 LANES): SINGLE LEFT LANE CLOSURE

NOT TO SCALE

FILE NAME	K:\452205\090\Vantage Bridge	- Replace Deck and Special Repairs\Design_CAD_Shee	ets\410-WZTC	Plan\WB_EB_S\	VZS\XL6352_PS_SP_SWZS.dgn					Plot 1
TIME	7:33:46 AM			REGION NO	FED.AID PROJ.NO.				l-90	PLAN REF NO
DATE	6/14/2023			10 V	ACH					ТС9
PLOTTED BY	McLaneA				A30				VANTAGE BRIDGE - REPLACE BRIDGE	1 103
DESIGNED BY	Z. BILSLAND			JOB NUM		ſ		Washington State	DECK, SPECIAL REPAIRS & DRAINAGE	SHEET
ENTERED BY	A. MCLANE			23Y0	05			9	•	154
CHECKED BY	E. WARREN			CONTRAC	NO. LOCATION NO.			Department of Transportation		_ OF
PROJ. ENGR.	M. SCULLY					DATE	DATE	-	STAGED TRAFFIC PLANS	166 SHEETS
REGIONAL ADM	T. BERENDS	REVISION	DATE	BY		P.E. STAMP BOX	P.E. STAMP BOX			SILEIS



																		1		. (m	npn)		
																		FRE	E FLOV	N 3	30+	FF	2. 9
																		SI	LOWED	<	<30	SL	J ,,
PCM	IS 1	VSL	PCM	S 2	VSL	PCM	S 3	PCM	S 4	PCM	S 5	PCM	IS 6	PCM	IS 7	PCM	IS 8	ד	RAFFI	IC S	SENS(ORS	3. I
2	1		2	1		2	1	2	1	2	1	2	1	2	1	2	1	Α			E F		4.7
2.0 SEC	2.0 SEC		2.0 SEC	2.0 SEC		2.0 SEC	2.0 SEC	2.0 SEC	2.0 SEC	2.0 SEC	2.0 SEC	2.0 SEC	2.0 SEC	2.0 SEC	2.0 SEC	2.0 SEC	2.0 SEC		TRAFF	IC C	ONDITI	ON	OR
NARROW LANE ON BRIDGE	2-WAY TRAFFIC AHEAD	55	FREEFLOW TRAFFIC TO BRIDGE	NO BACKUPS DETECTED	55	BLANK	BLANK	LEFT LANE CLOSED	1 MILE AHEAD	(Blank)		(Blank)		(Blank)		FREEFLOW TRAFFIC TO BRIDGE		FF	FF FF	FF F	=F FF	FF FI	5. I
SLOW OR STOPPED TRAFFIC	UP TO BRIDGE 1/2 MILE	40	TRAFFIC BACKUPS PRESENT	1 MILE AHEAD AT SR26 IC	40	BLANK	BLANK	LEFT LANE CLOSED	1 MILE AHEAD	(Blank)		(Blank)		(Blank)		(Blank)		SL	FF FF	FF F	=F FF	FF FI	E 6.1
NARROW LANE ON BRIDGE	2-WAY TRAFFIC AHEAD	40	SLOW OR STOPPED TRAFFIC	NEXT 1.5 MILES	40	TRAFFIC BACKUPS PRESENT	## MINUTE DELAY	LEFT LANE CLOSED	1 MILE AHEAD	(Blank)		(Blank)		(Blank)		(Blank)		SL	SL FF	FF F	FF FF	FF FI	
NARROW LANE ON BRIDGE	2-WAY TRAFFIC AHEAD	40	SLOW OR STOPPED TRAFFIC	NEXT 1.5 MILES	40	SLOW OR STOPPED TRAFFIC	NEXT 2 MILES	LEFT LANE CLOSED	1 MILE AHEAD	TRAFFIC BACKUPS PRESENT	## MINUTE DELAY	SINGLE LANE CLOSURE	3 MILES AHEAD	(Blank)		(Blank)		SL	SL SL	FF F	FF FF	FF FI	8.1
NARROW LANE ON BRIDGE	2-WAY TRAFFIC AHEAD	40	SLOW OR STOPPED TRAFFIC	NEXT 1.5 MILES	40	MERGE HERE	TAKE TURNS	SLOW OR STOPPED TRAFFIC	NEXT 3 MILES	TRAFFIC BACKUPS PRESENT	## MINUTE DELAY	SINGLE LANE CLOSURE	3 MILES AHEAD	(Blank)		(Blank)		SL	SL SL	SL F	FF FF	FF FI	10.
NARROW LANE ON BRIDGE	2-WAY TRAFFIC AHEAD	40	SLOW OR STOPPED TRAFFIC	NEXT 1.5 MILES	40	MERGE HERE	TAKE TURNS	1 MILE TO MERGE POINT	USE BOTH LANES	SLOW OR STOPPED TRAFFIC	NEXT 4 MILES	TRAFFIC BACKUPS PRESENT	## MINUTE AHEAD	SINGLE LANE CLOSURE	4.5 MILES AHEAD	(Blank)		SL	SL SL	SL	SL FF	FF FI	=
NARROW LANE ON BRIDGE	2-WAY TRAFFIC AHEAD	40	SLOW OR STOPPED TRAFFIC	NEXT 1.5 MILES	40	MERGE HERE	TAKE TURNS	1 MILE TO MERGE POINT	USE BOTH LANES	2 MILES TO MERGE POINT	## MINUTE DELAY	SLOW OR STOPPED TRAFFIC	NEXT 5 MILES	TRAFFIC BACKUPS PRESENT	## MINUTE DELAY	SINGLE LANE CLOSURE	6 MILES AHEAD	SL	SL SL	SL	SL SL	FF FI	=
NARROW LANE ON	2-WAY TRAFFIC AHEAD	40	SLOW OR STOPPED	NEXT 1.5 MILES	40	MERGE HERE	TAKE TURNS	1 MILE TO MERGE	USE BOTH	2 MILES TO MERGE	USE BOTH	3 MILES TO MERGE	## MINUTE	SLOW OR STOPPED	NEXT 6.5 MILES	TRAFFIC BACKUPS	## MINUTE	SL	SL SL	SL S	SL SL	SL SI	

POINT

2 MILES

TO MERGE

LANES

вотн

POINT

O MERGE

LANES

USE

AHEAD

2-WAY

TRAFFIC

AHEAD

BRIDGE

BRIDGE

MILES

NEXT

1.5 MILES

MERGE

HERE

TAKE

TURNS

TRAFFIC

SLOW OR

STOPPED

TRAFFIC

WESTBOUND 9-MILE SMART WORK ZONE SYSTEM FREEWAY (2 LANES): SINGLE LEFT LANE CLOSURE

DELAY

USE

вотн

LANES

TRAFFIC

4.5 MILES

TO MERGE

POINT

MINUTE

POINT

3 MILES

TO MERGE

POINT

MILES PRESENT DELAY

SLOW OR

STOPPED

TRAFFIC

NEXT

|SL|SL|SL|SL|SL|SL|SL

TRIGGER SPEED SYMBOL

TRAFFIC

CONDITION

- 1. THIS PLAN IS USED IN CONJUNCTION WITH TC1-TC4, TC6-TC7.
- 2. SEE SMART WORK ZONE SYSTEM (SWZS) SPECIAL PROVISION FOR DETAILS.
- 3. MODIFICATIONS TO PCMS MESSAGES SHALL BE ACCEPTED BY THE ENGINEER. "##" ARE CHANGEABLE VALUES BASED ON REAL-TIME TRAVEL DELAY TIMES.
- 4. ADJUST SWZS COMPONENTS TO AVOID CONFLICTS WITH SEQUENTIAL ARROW SIGNS OR OTHER TRAFFIC CONTROL DEVICES, NARROW SHOULDERS, AND RAMPS.
- 5. LOCATE PCMSs PER STANDARD SPECIFICATION 1-10.3(3)C. PCMS MAY BE PLACED ON OPPOSITE SHOULDER BUT AVOID RAMP GORES. WHEN LOCATED BEHIND BARRIER/GUARDRAIL OR WITHIN CLOSURE, TRANSVERSE TRAFFIC DRUMS OPTIONAL.
- 6. MINIATURE PCMS (~6'WIDE, 12+ INCH CHARACTERS) ALLOWED FOR PCMS1.
- 7. IN LIEU OF TRAVEL TIME READERS, ALTERNATIVE METHODS (SUCH AS USING TRAFFIC SENSOR SPEED DATA) IS ACCEPTABLE WHEN ACCURATE WITHIN 5± MINUTES.
- 8. LOCATE SIDE FIRE TRAFFIC SENSOR WEST OF SR26 ON-RAMP, CAN BE LOCATED ON OR JUST WEST OF VANTAGE BRIDGE.
- 9. IF SYSTEM FAILS SEE "SMART WORK ZONE SYSTEM FAILURE PROTOCOL" PROVISION.
- 10. IF TRAFFIC QUEUES REACH 5 MILES, PLACE ADDITIONAL PCMS AT 6.5 MILES. RELOCATE TO REMAIN 0.5± MILE IN ADVANCE OF QUEUE. TRUCK-MOUNTED PCMS WITH 10+ INCH CHARACTERS ACCEPTABLE. TRANSVERSE TRAFFIC SAFETY DRUMS OPTIONAL.REMOVE PCMS WHEN DISSIPATING QUEUES ARE LESS THAN 5 MILES.PCMS MESSAGE: TRAFFIC BACKUPS PRESENT / WATCH FOR SLOW TRAFFIC

LEGEND TRAFFIC SAFETY DRUM TRAFFIC SENSOR SFTS SIDE FIRE TRAFFIC SENSOR PORTABLE TRAVEL TIME READER SEQUENTIAL ARROW SIGN

PCMS	PORTABLE CHANGEABLE MESSAGE SIGN	
	PAN-TILT-ZOOM CAMERA	

FILE NAME	K:\452205\090\Vantage Bridge	- Replace Deck and Special Repairs\Design_CAD_Shee	ts\410-WZTC	Plan\WB_EB_SWZS\X	L6352_PS_SP_SWZS.dgn					Plot 6
TIME	7:33:54 AM			REGION STATE	FED.AID PROJ.NO.				I-90	PLAN REF NO
DATE	6/14/2023			10 WASH					\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	TC10
PLOTTED BY	McLaneA			II WASH					VANTAGE BRIDGE - REPLACE BRIDGE	10.0
DESIGNED BY	Z. BILSLAND			JOB NUMBER				Washington State	DECK, SPECIAL REPAIRS & DRAINAGE	SHEET
ENTERED BY	A. MCLANE			23Y005					·	155
CHECKED BY	E. WARREN			CONTRACT NO.	LOCATION NO.			Department of Transportation		OF
PROJ. ENGR.	M. SCULLY					DATE	DATE	-	STAGED TRAFFIC PLANS	166 SHEETS
REGIONAL ADM.	T. BERENDS	REVISION	DATE	BY		P.E. STAMP BOX	P.E. STAMP BOX			SHEETS

PCMS 1 55 MPH LANE ZONE CLOSURE AHEAD 2.0 SEC 2.0 SEC

NOTES

20' (FT).

HOST VEHICLE WEIGHT

LESS THAN 22,000 lbs.

22,000+ lbs.

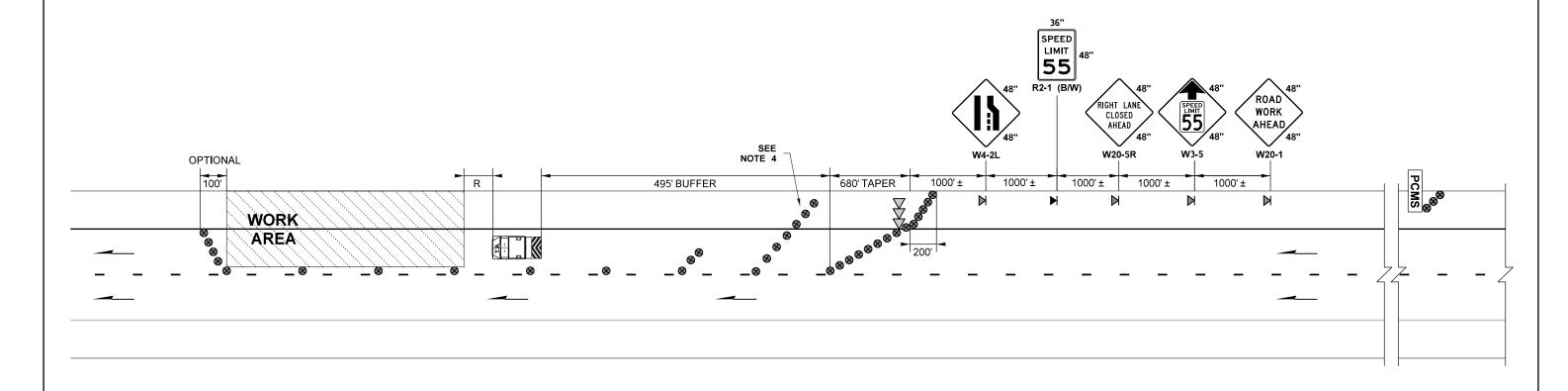
STATIONARY TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R

LOCATE LOCATE 1.5+/- MILES IN ADVANCE OF LANE CLOSURE.

	M CHANNE E SPACING	
MPH	TAPER	TANGENT
55	40	80

123'

100'



LEGEND

- TEMPORARY SIGN LOCATION
- TRAFFIC SAFETY DRUM

SEQUENTIAL ARROW SIGN

TRANSPORTABLE ATTENUATOR

PORTABLE CHANGEABLE MESSAGE SIGN PCMS

NOT TO SCALE

SINGLE-LANE CLOSURE FOR MULTI-LANE ROADWAYS

		Washington State Department of Transportation
DATE	DATE	

I-90 VANTAGE BRIDGE - REPLACE BRIDGE DECK, SPECIAL REPAIRS & DRAINAGE

1. SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.

3. DEVICES SHALL NOT ENCROACH INTO THE ADJACENT LANE. 4. USE TRANSVERSE DEVICES IN CLOSED LANE EVERY 1000'(FT)

5. DEVICE SPACING FOR THE DOWNSTREAM TAPER SHALL BE

6. ALL SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE NOTED.

2. EXTEND DEVICE TAPER AT L/3 ACROSS SHOULDER.

TRAFFIC CONTROL PLAN

PLAN REF NO TC11 156 OF 166 SHEETS

Plot 1

FILE NAME	K:\452205\090\Vantage Bridge	- Replace Deck and	Special Repairs\Design\	_CAD_Shee	ets\410-WZTC	Plan\S	ingle L	ane Clo	sure\XL6352_PS_TC_SLC.dgn
TIME	7:32:21 AM						REGION NO.	STATE	FED.AID PROJ.NO.
DATE	6/14/2023							WASH	
PLOTTED BY	McLaneA						10	WASH	
DESIGNED BY	Z. BILSLAND							IUMBER	
ENTERED BY	A. MCLANE						23Y	′005	
CHECKED BY	E. WARREN						CONTR	RACT NO.	LOCATION NO.
PROJ. ENGR.	M. SCULLY								
REGIONAL ADM.	T. BERENDS		REVISION		DATE	BY			

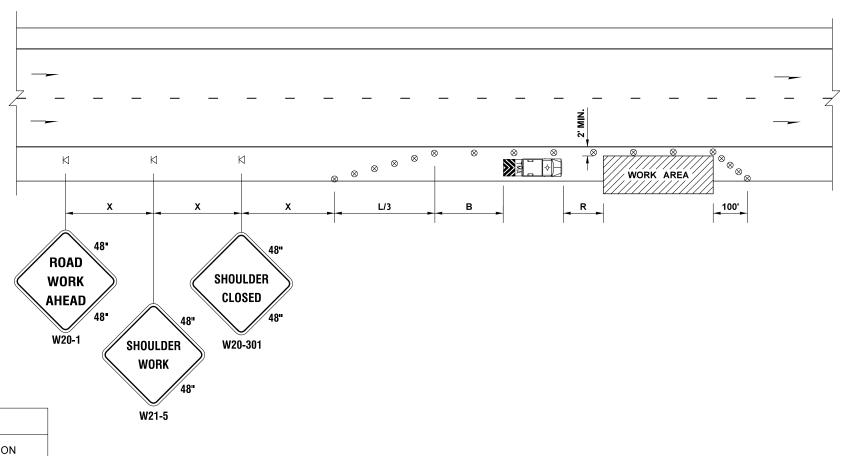
	MINIM	IUM S	HOULI	DER T	APER	LENG	TH =	L/3 (fe	et)	
SHOULDER				Pos	ted Sp	eed (n	nph)			
WIDTH (feet)	25	30	35	40	45	50	55	60	65	70
8'	-	-	-	-	120	130	150	160	170	190
10'	-	-	-	-	150	170	190	200	220	240
	USE A MINIMUM 3 DEVICES TAPER FOR SHOULDER LESS THEN 8'.									

SIGN SPACIN	NG = X (1)	
FREEWAYS & EXPRESSWAYS	55 / 70 MPH	1500' ±
RURAL HIGHWAYS	60 / 65 MPH	800' ±
RURAL ROADS	45 / 55 MPH	500' ±
(1) ALL SPACING MAY BE ADJUSTED RAMPS, AT-GRADE INTERSECTIONS		INTERCHANGE

CHANNELIZATION DEVICE SPACING (feet)									
MPH	TAPER	TANGENT							
50/70	40	80							
35/45	30	60							

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730

TRANS	PORTABLE A	ATTENUATOR	R ROLL AHE	EAD DISTAN	CE = R		
	VEHICLE WEIG 0 TO 22,000 lbs		HOST VEHICLE WEIGHT > 22,000 lbs.				
< 45 MPH	45-55 MPH	> 55 MPH	< 45 MPH	45-55 MPH	> 55 MPH		
100'	123'	172'	74'	100'	150'		



LEGEND

TEMPORARY SIGN LOCATION

⊗ TRAFFIC SAFETY DRUM

TRANSPORTABLE ATTENUATOR

SHOULDER CLOSURE - HIGH SPEED

NOT TO SCALE

NOTES

- 1. NO ENCROACHMENT IN TRAVELED LANE. IF ENCROACHMENT IS NECESSARY, LANE SHALL BE CLOSED.
- 2. DEVICE SPACING FOR THE DOWNSTREAM TAPER SHALL BE 20' (FT) O.C.
- 3. ALL SIGNS ARE BLACK ON ORANGE.

FILE NAME	K:\452205\090\Vantage Bridge	- Replace Deck	and Special Repai	irs\Design_CAD\	Sheets\410-WZTC	Plan\S	houlde	r Closur	e\XL6352_TC_:	SC1.dgn	I
TIME	7:31:07 AM						REGION NO.	STATE	FED.AID	PROJ.NO.	1
DATE	6/14/2023							WASH			۱,
PLOTTED BY	McLaneA							WASH			1
DESIGNED BY	Z. BILSLAND						JOB N				
ENTERED BY	A. MCLANE						23Y	'005			13
CHECKED BY	E. WARREN						CONTR	ACT NO.	LOCA	TION NO.	7
PROJ. ENGR.	M. SCULLY										
REGIONAL ADM.	T. BERENDS		REVISION		DATE	BY					





I-90
VANTAGE BRIDGE - REPLACE BRIDGE
DECK, SPECIAL REPAIRS & DRAINAGE

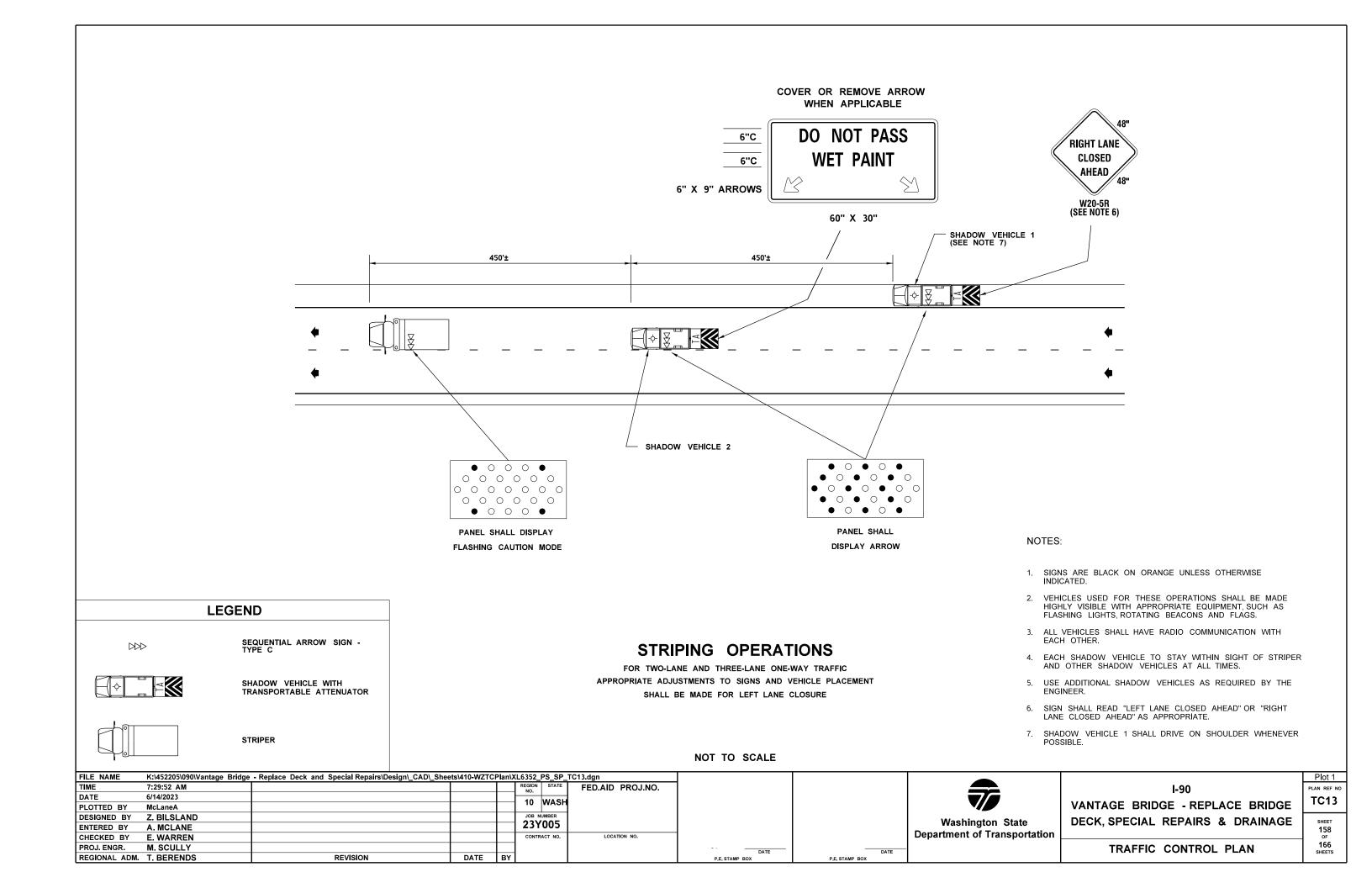
TRAFFIC CONTROL PLAN

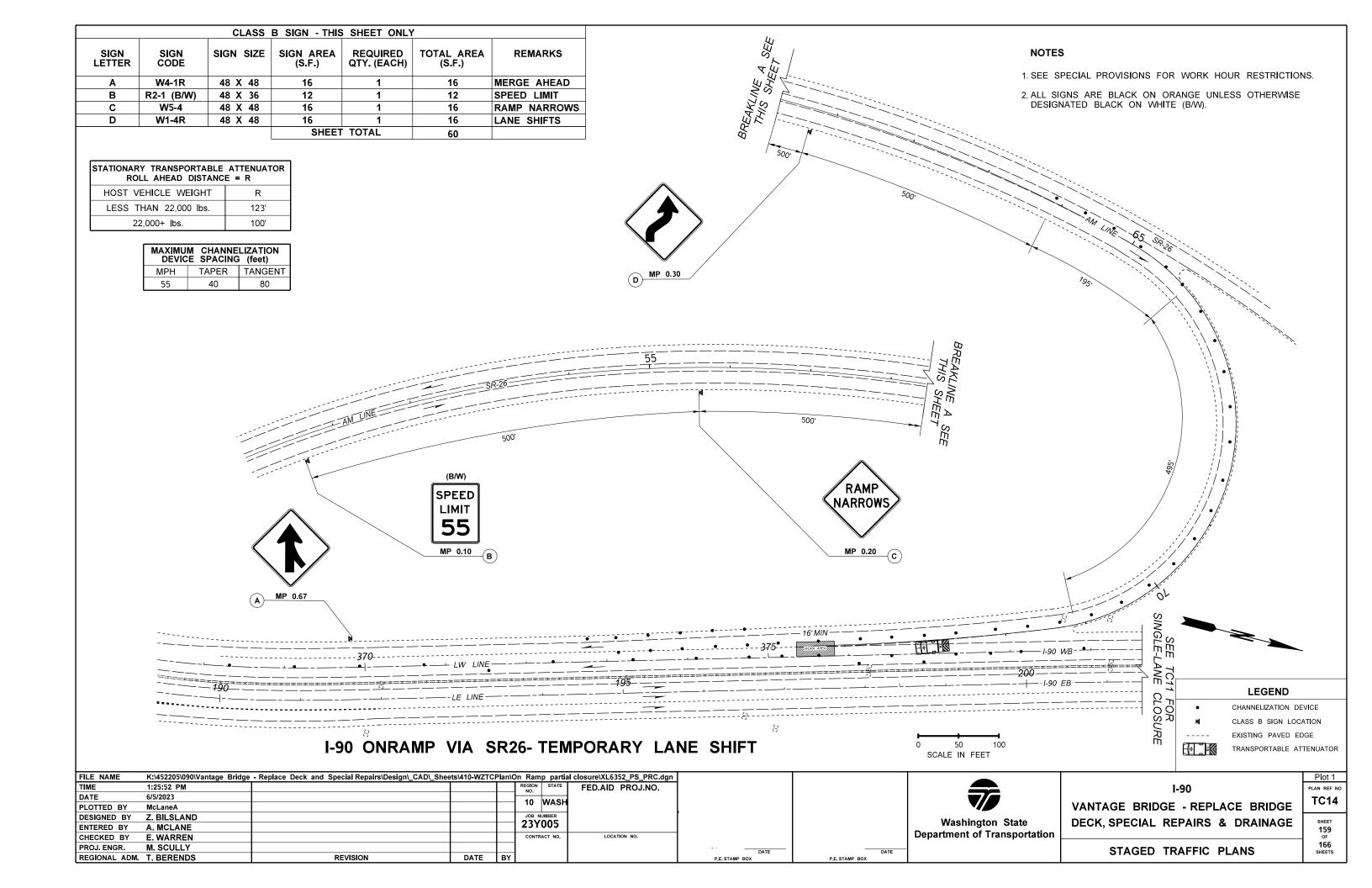
TC12

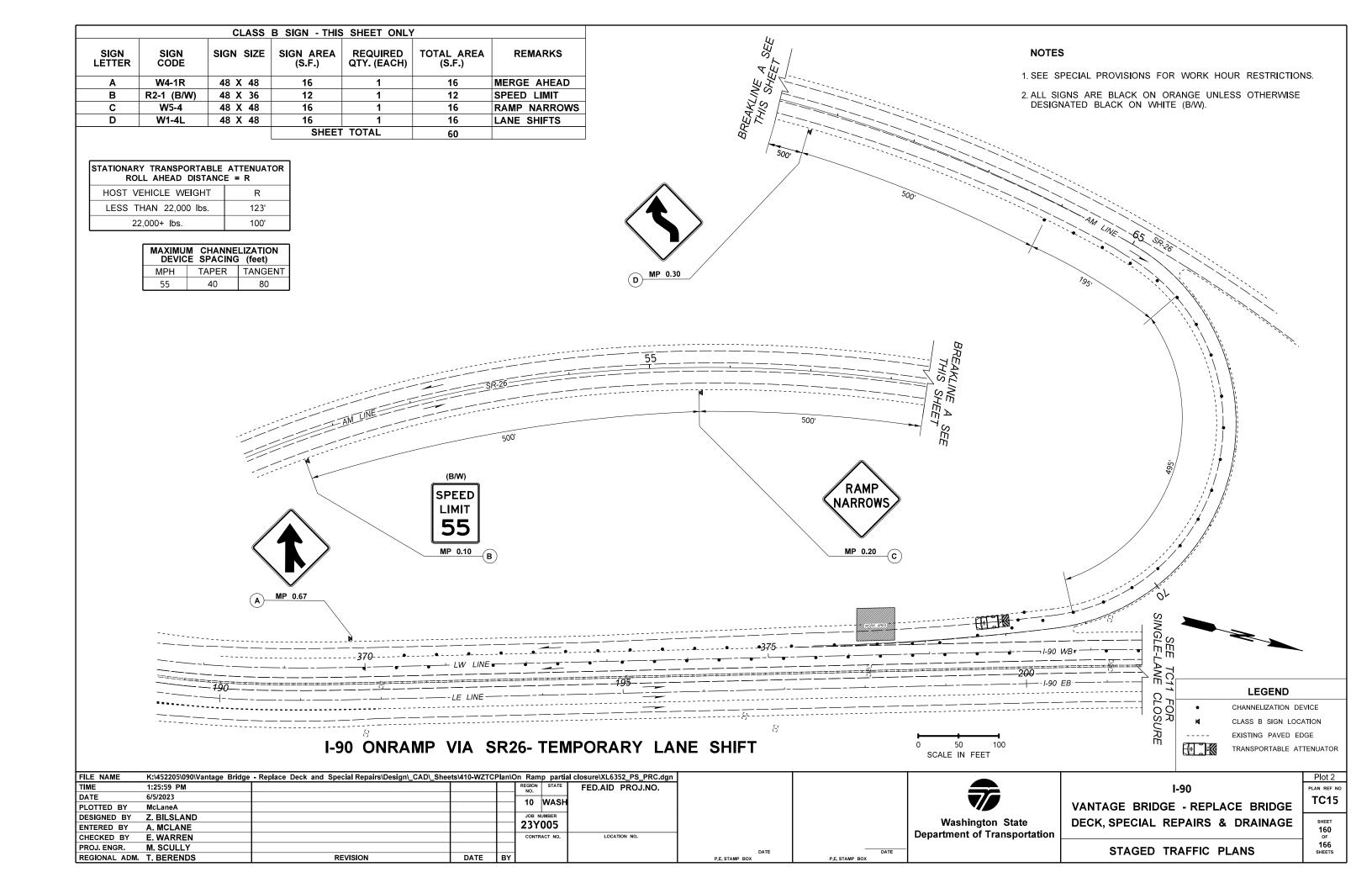
SHEET
157
OF
166
SHEETS

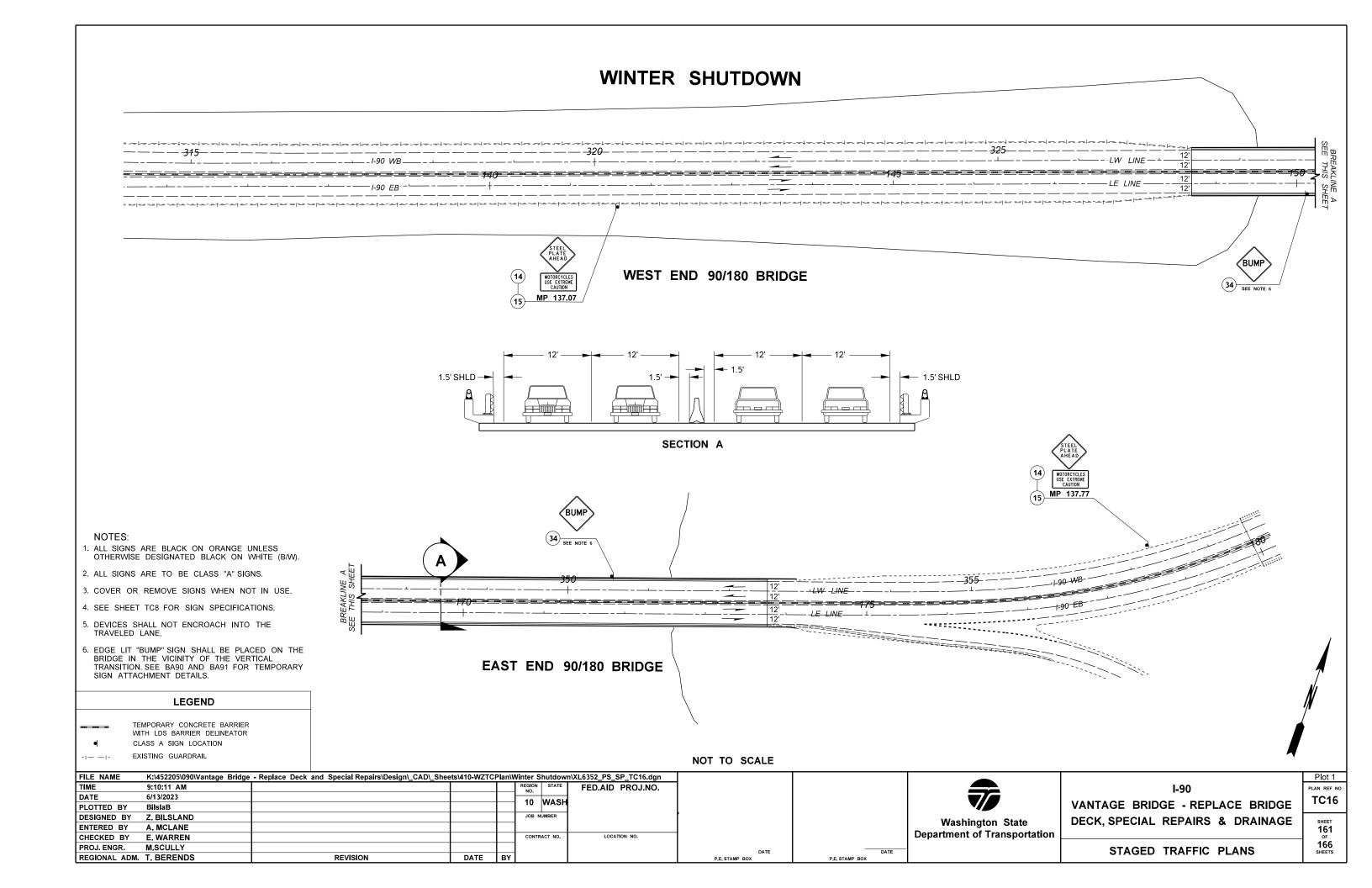
Plot 1

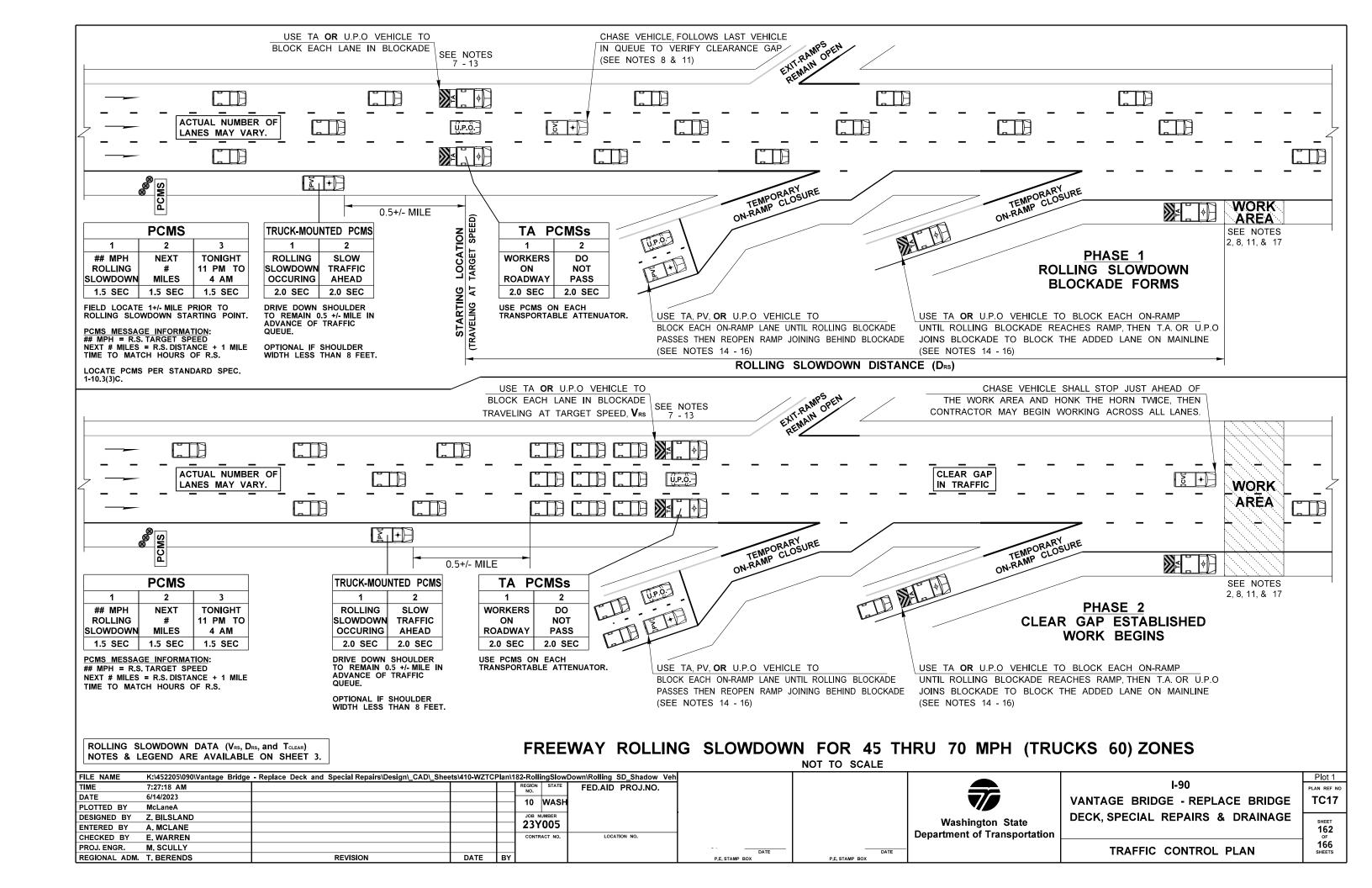
PLAN REF NO

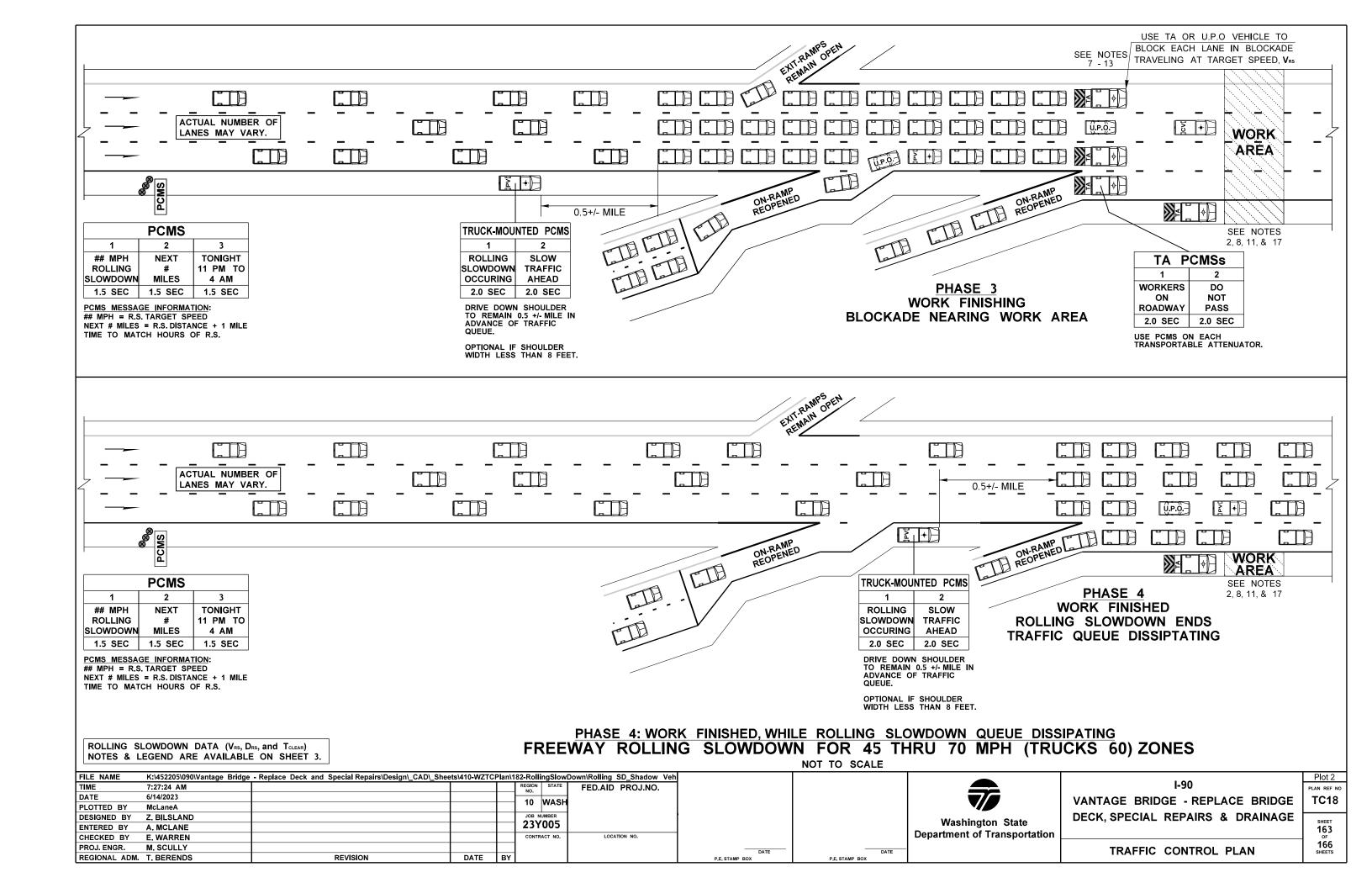


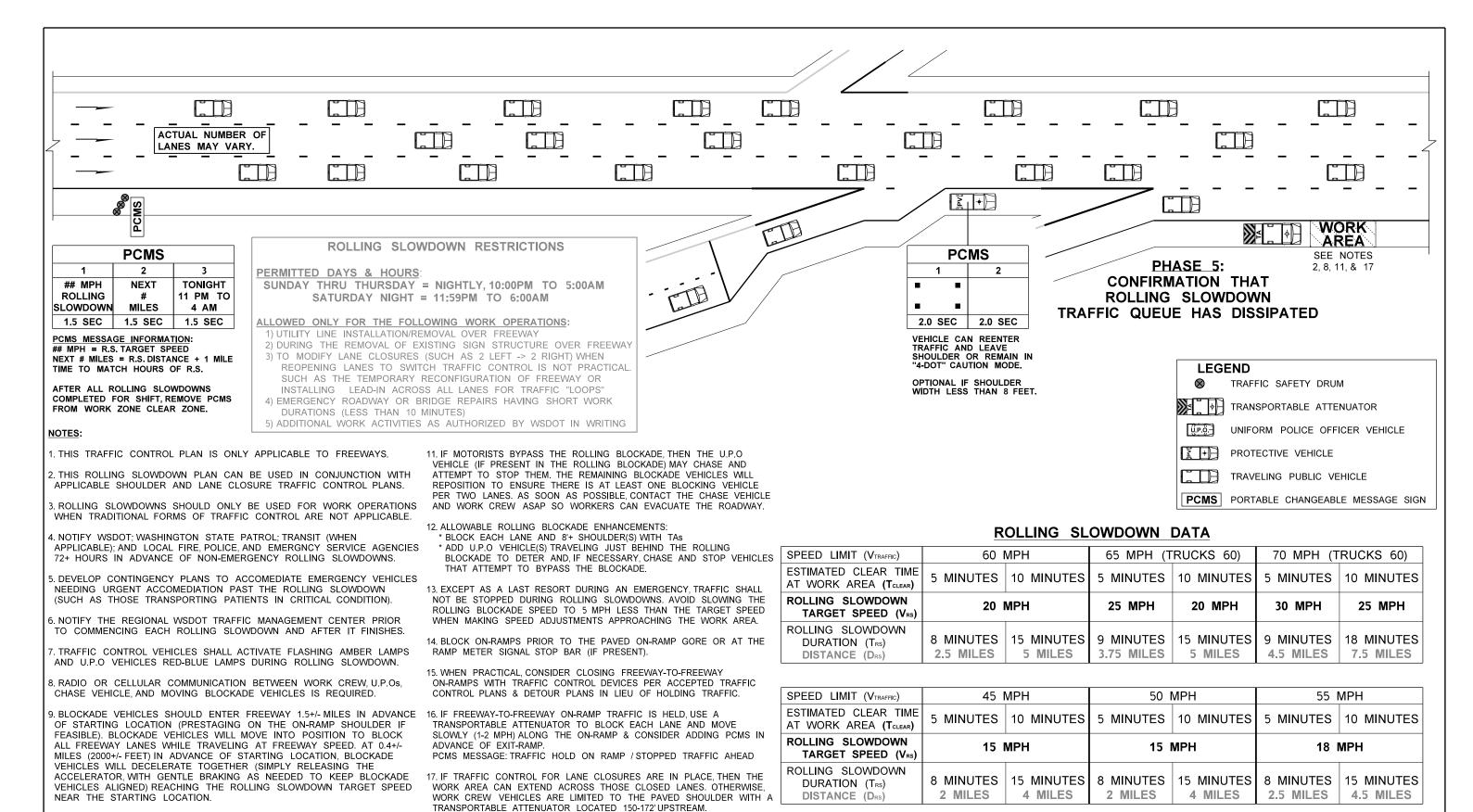










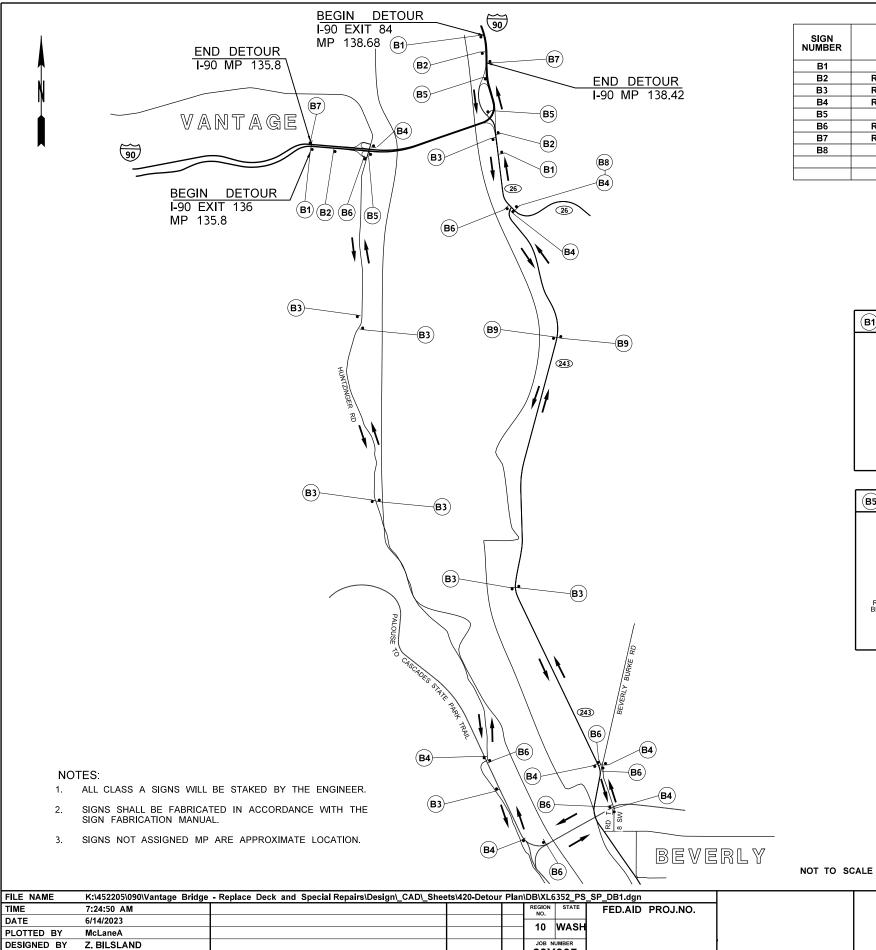


FREEWAY ROLLING SLOWDOWN FOR 45 THRU 70 MPH (TRUCKS 60) ZONES

FILE NAME	K:\452205\090\Vantage Bridge - Replace Deck	and Special Repairs\Design_CAD_She	ets\410-WZTCF	Plan\18	2-RollingSlow	Down\Rolling SD_Shadow Veh					Plot 3
TIME	7:27:31 AM				REGION STATE	FED.AID PROJ.NO.				l-90	PLAN REF NO
DATE	6/14/2023				10 WASH					VANTAGE BRIDGE BERLAGE	TC19
PLOTTED BY	McLaneA				10 WASH					VANTAGE BRIDGE - REPLACE	1.0.5
DESIGNED BY	Z. BILSLAND				JOB NUMBER		"		Washington State	BRIDGE DECK AND SPECIAL REPAIRS	SHEET
ENTERED BY	A. MCLANE				23Y005]		164
CHECKED BY	E. WARREN				CONTRACT NO.	LOCATION NO.			Department of Transportation		OF
PROJ. ENGR.	M. SCULLY						DATE	DATE		TRAFFIC CONTROL PLAN	166 SHEETS
REGIONAL ADM	I. T. BERENDS	REVISION	DATE	BY			P.E. STAMP BOX	P.E. STAMP BOX		INALLIO GONTROL I LAN	SHEETS

10. THE ROLLING SLOWDOWN DURATION BEGINS WHEN THE TARGET

SPEED IS REACHED AT THE ROLLING SLOWDOWN STARTING LOCATION.



REVISION

ENTERED BY

PROJ. ENGR.

CHECKED BY E. WARREN

REGIONAL ADM. T. BERENDS

A. MCLANE

M. SCULLY

23Y005

CONTRACT NO.

DATE BY

LOCATION NO.

SIGN NUMBER	SIGN CODE	SHEET REFERENCE **	SIGN AREA (S.F.)	REQUIRED QTY. (EACH)	TOTAL AREA (S.F.)	REMARKS
B1	R5-601	BD	4	3	12	MUST EXIT'/MILE
B2	R4-9C(MOD)	BD	6	3	18	BIKE DETOUR 45 ARROW
B3	R4-9C(MOD)	BD	6	10	60	BIKE DETOUR 0 ARROW
B4	R4-9C(MOD)	BD	6	8	48	BIKE DETOUR 270 ARROW
B5	R5-6	BD	4	3	12	NO BIKES ALLOWED
B6	R4-9C(MOD)	BD	6	7	42	BIKE DETOUR 90 ARROW
B7	R4-9C(MOD)	BD	6	2	12	END BIKE DETOUR
B8	CUSTOM	BD	2	1	2	I-90 WESTBOUND
			SH	EET TOTAL	206	

B1 3 REQUIRED	B2 3 REQUIRED	B3 10 REQUIRED	(B4) 8 REQUIRED
24"	BIKE DETOUR M4-9C (MOD) BLACK LEGEND ORANGE BACKGROUND BIKE SYMBOL - 11"X18" FONT - 4D	M4-9C (MOD) BLACK LEGEND ORANGE BACKGROUND BIKE SYMBOL - 11"X18" FONT - 4D	BIKE DETOUR M4-9C (MOD) BLACK LEGEND ORANGE BACKGROUND BIKE SYMBOL - 11"X18" FONT - 4D

B5 3 REQUIRED	B6 7 REQUIRED	B7 2 REQUIRED	B8 1 REQUIRED
24" R5-6 RED CIRCLE & DIAGONAL BLACK SYMBOL & BORDER WHITE BACKGOUND BIKE SYMBOL - 11"X18" FONT - 4D	24" BIKE DETOUR M4-9C (MOD) BLACK LEGEND ORANGE BACKGROUND BIKE SYMBOL - 11"X18" FONT - 4D	24" END BIKE DETOUR M4-9C (MOD) BLACK LEGEND ORANGE BACKGROUND BIKE SYMBOL - 11"X18" FONT - 4D	24" WESTBOUND 12" CUSTOM BLACK LEGEND ORANGE BACKGROUND FONT - 4D TO BE PLACED ABOVE B4 AT THIS LOCATION.

LEGEND

CLASS A SIGN LOCATION

CONSTRUCTION SIGN NOTE

I-90 VANTAGE BRIDGE - REPLACE BRIDGE DECK, SPECIAL REPAIRS & DRAINAGE

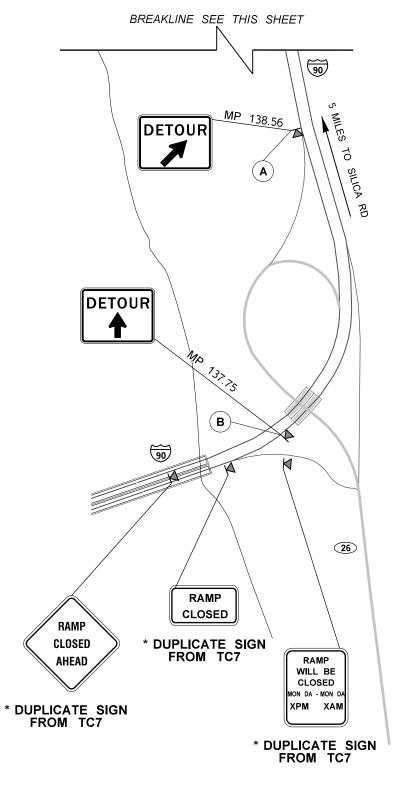
BICYCLE ALTERNATE ROUTE PLAN

DB1 165 OF 166 SHEETS

Plot 8

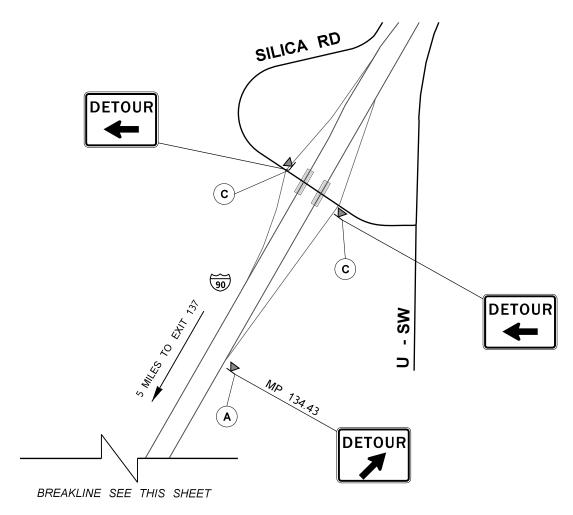
PLAN REF NO

Washington State
Department of Transportation DATE DATE





SIGN LETTER	SIGN CODE	SHEET REFERENCE	SIGN SIZE	SIGN AREA (S.F.)	REQUIRED QTY. (EACH)	TOTAL AREA (S.F.)	REMARKS
Α	M4-9 MOD	RD	48 X 36	12	2	24	DETOUR (ARROW 45)
В	M4-9	RD	48 X 36	12	1	12	DETOUR (ARROW 0)
D	M4-9L	RD	48 X 36	12	2	24	DETOUR (ARROW 270)
				SHEET	TOTAL	60	



DETOUR ROUTE - SILICA RD

NOTES

- 1. SEE SPECIAL PROVISIONS FOR CLOSURE HOUR RESTRICTIONS.
- 2. TYPICAL APPLICATION SHOWN. ADJUST FOR SITE CONDITIONS.
- 3. ALL SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED BLACK ON WHITE (B/W).

NOT TO SCALE

FILE NAME	K:\452205\090\Vantage Bridge - Replace Deck and Special Repairs\Design_CAD_Sheets\420-Detour Plan\DU\XL6352_PS_DU.dgn										Pl
TIME	7:23:34 AM				REGION STATE	FED.AID PROJ.NO.				I-90	PLAN
DATE	6/14/2023				10 WASH					VANITAGE BRIDGE BERLAGE BRIDGE	10
PLOTTED BY	McLaneA				10 WASI					VANTAGE BRIDGE - REPLACE BRIDGE	
DESIGNED BY	Z. BILSLAND				JOB NUMBER				Washington State	DECK, SPECIAL REPAIRS & DRAINAGE	
ENTERED BY	A. MCLANE				23Y005				9	l ,	7
CHECKED BY	E. WARREN				CONTRACT NO.	LOCATION NO.			Department of Transportation		-
PROJ. ENGR.	M. SCULLY						DATE	DATE		RAMP CLOSURE DETOUR PLAN	s
REGIONAL ADM	T RERENDS	REVISION	DATE	RV			DE STAND DOY	DE STAMP BOY		I TAME SECOND BETOOK I EAR	1 "